PB90-107186

Superfund Record of Decision (EPA Region 1): Pinette's Salvage Yard Aroostook County, ME. (First Remedial Action), May 1989

(U.S.) Environmental Protection Agency, Washington, DC

May 89

U.S. Department of Commerce
National Technical Information Service
NTIS

50272-101

REPORT DOCUMENTATION PAGE	1. REPORT NO. EPA/ROD/R01-89/034	2.	3. Recipient's Accession No. PB90 107186/AS
4. Title and Subtitle SUPERFUND RECORD OF DECISION Pinette's Salvage Yard, ME First Remedial Action - Final			5. Report Date 05/30/89
			6.
7. Author(s)			8. Performing Organization Rept. No.
9. Performing Orgainization Name and Address			10. Project/Task/Work Unit No.
			11. Contract(C) or Grant(G) No. (C) (G)
12. Sponsoring Organization Name and Address U.S. Environmental Protection Agency 401 M Street, S.W. Washington, D.C. 20460			13. Type of Report & Period Covered 800/000
			14.

15. Supplementary Notes

16. Abstract (Limit: 200 words)

The Pinette's Salvage Yard site is located approximately one mile southwest of the town of Washburn, Aroostook County, Maine, in the northeast corner of the State. The site consists of a vehicle repair and salvage yard and an adjacent undeveloped area containing wetlands. Land surrounding the site is used for residential, general industrial, and agricultural purposes. An undeveloped forest and a wetlands area are also adjacent to the site. The water supply for the approximately eight to ten residences located within a one-half mile radius of the site is obtained from private wells located in the deep, bedrock aquifer below the site. Municipal wells, used to supply the drinking water to the residents of Washburn, are located one mile northeast of the site. In June 1979 three electrical transformers were removed from Loring Air Force Base by a private electrical contractor and allegedly brought to the site where they ruptured while being moved from the delivery vehicle. Approximately 900 to 1,000 gallons of dielectric fluid containing PCBs spilled directly onto the ground. A removal action was performed in late 1983 which included excavation and offsite disposal of 800 yd3 of PCB-contaminated soil from the site. Subsequent investigations at the site revealed the presence of a wide range of PCB concentrations in the surface and subsurface soils. The highest levels of PCBs are in the general area of the transformer (See Attached Sheet)

17. Document Analysis a. Descriptors

Record of Decision - Pinette's Salvage Yard, ME
First Remedial Action - Final
Contaminated Media: soil, gw
Key Contaminants: VOCs (benzene), Organics (PCBs), metals (lead)

b. Identifiers/Open-Ended Terms

c. COSATI Field/Group

18. Availability Statement	19. Security Class (This Report) None	21. No. of Pages 181
	20. Security Class (This Page) None	22. Price

(See ANSI-Z39.18)

See Instructions on Reverse

OPTIONAL FORM 272 (4-77)
(Formerly NTIS-35)
Department of Commerce

United States
Environmental Protection
Agency

Office of
Emergency and
Remedial Response

EPA/ROD/R01-89/034
May 1989

PB90-107186

EPA

Superfund Record of Decision:

Pinette's Salvage Yard, ME

REPRODUCED BY
U.S. DEPARTMENT OF COMMERCE
NATIONAL TECHNICAL INFORMATION SERVICE
SPRINGFIELD, VA. 22161

16. Abstract (continued)

fluid spill. Surface migration of PCBs extends as far as the undeveloped land adjacent to the salvage yard. In addition, soil contaminated with chlorinated benzenes was found in the spill area. The total volume of contaminated soil above 5 mg/kg PCBs and containing other organics is approximately 2,200 yd3. Detectable concentrations of PCBs and benzene compounds were identified in both the shallow and deep aquifers localized within and slightly downgradient of the spill area. This remedy is designed primarily to address soil contamination and, to the extent practicable, ground water contamination at the site. The primary contaminants of concern affecting the soil and ground water are VOCs including benzene; organics including PCBs; and metals including lead.

The selected remedial action for this site includes excavation and offsite incineration of 300 yd3 of soil containing greater than 50 mg/kg PCBs; excavation and onsite solvent extraction of 1,700 to 1,900 yd3 of soil containing between 5 and 50 mg/kg PCBs and other organic contaminants, with offsite incineration of treatment process effluent and onsite treatment of air emissions; excavation of approximately 500 yd3 of surface soil containing between 1 and 5 mg/kg PCBs to a minimum depth of 10 inches and placement, along with treated soil, in the area where more highly contaminated soil was excavated, followed by additional soil covering and revegetation; onsite ground water pumping, and collection via interceptor trenches, with treatment using filtration and carbon adsorption, followed by discharge of treated water into the shallow aquifer; access restrictions; institutional controls; and sediment, ground water, and surface water monitoring. The estimated present worth cost for this site is $4,367,000 which includes annual O&M costs of $135,000 for years 1-2, $42,000 for years 3-5, and $20,000 for years 6-30.

ATTENTION

PORTIONS OF THIS REPORT ARE NOT FULLY LEGIBLE. DUE TO THE IMPORTANCE OF THE MATERIAL IT IS MADE AVAILABLE TO THE PUBLIC. HOWEVER, IT IS THE BEST REPRODUCTION AVAILABLE FROM THE COPY SENT TO NTIS.

DOCUMENT COMPLETE AS PAGINATED PER SOURCE.

DIRECT QUESTIONS RESULTING FROM ILLEGIBILITY TO:

U.S. EPA
OSWER - HSCD

1.6

ROD DECISION SUMMARY

PINETTE'S SALVAGE YARD SUPERFUND SITE

WASHBURN, AROOSTOOK COUNTY, MAINE

MAY 30, 1989

U.S. ENVIRONMENTAL PROTECTION AGENCY

REGION I

PINETTE'S SALVAGE YARD SUPERFUND SITE
ROD DECISION SUMMARY

TABLE OF CONTENTS

Contents — Page Number

I. SITE NAME, LOCATION AND DESCRIPTION................ 1
II. SITE HISTORY AND ENFORCEMENT ACTIVITIES............ 3
  A. Remedial History.............................. 4
  B. Enforcement History........................... 5
III. COMMUNITY RELATIONS............................. 5
IV. SCOPE AND ROLE OF RESPONSE ACTION................ 6
V. SITE CHARACTERISTICS.............................. 6
  A. Soil.. 7
  B. Groundwater................................... 8
VI. SUMMARY OF SITE RISKS............................ 8
VII. DOCUMENTATION OF NO SIGNIFICANT CHANGES......... 10
VIII. DEVELOPMENT AND SCREENING OF ALTERNATIVES....... 10
  A. Statutory Requirements/Response Objectives.... 10
  B. Technology and Alternative Development and Screening.......................... 11
IX. DESCRIPTION/SUMMARY OF THE DETAILED AND COMPARATIVE ANALYSIS OF ALTERNATIVES.............. 13
  A. Source Control (SC) Alternatives Analyzed..... 13
  B. Management of Migration (MM) Alternatives Analyzed.............................. 17
X. THE SELECTED REMEDY.............................. 19
  A. Description of the Selected Remedy............ 19
  B. Rationale for Selection/Cleanup Goals......... 22
    1. Source Control.............................. 23
    2. Management of Migration..................... 25
XI. STATUTORY DETERMINATIONS......................... 26
  A. The Selected Remedy is Protective of Human Health and the Environment................. 27
  B. The Selected Remedy Attains ARARs............. 28
  C. The Selected Remedial Action is Cost-Effective...................................... 32

D. The Selected Remedy Utilizes Permanent Solutions and Alternative Treatment or Resource Recovery Technologies to the Maximum Extent Practicable.................. 33
E. The Selected Remedy Satisfies the Preference for Treatment as a Principal Element........ 33

XII. STATE ROLE.. 34

PINETTE'S SALVAGE YARD SUPERFUND SITE
ROD DECISION SUMMARY

LIST OF FIGURES/TABLES/ATTACHMENTS

Figure Number/Title — Page Number

1-1. Site Location Map.................................... 1A
1-2. Site Vicinity Map.................................... 1B
1-3. Location of Geologic Cross-Sections.................. 2A
1-4. Geologic Cross-Sections.............................. 2B
1-5. Property Boundaries.................................. 3A
1-6. Extent and Depth of PCB Contaminated Soil (1 ppm or greater)........................... 7A
1-7. Supplemental Remedial Investigation Monitoring Well Locations.......................... 8A
1-8. Organic Contamination/Shallow Aquifer................ 8B
1-9. Organic Contamination/Deeper Aquifer................. 8C

Table Number/Title

1-1. Summary of Chemicals of Potential Concern............ 9A
1-2. Summary of Potential Human Health Risks.............. 9B-9D
1-3. Merging of SC and MM Alternatives.................... 13A
2-1. Potential Chemical-Specific ARARs and Criteria, Advisories and Guidance................ 28A-28D
2-2. Potential Location-Specific ARARs and Criteria, Advisories and Guidance................ 28E-28G
2-3. Potential Action-Specific ARARs...................... 28H-28P

Attachments

A. Pinette's Salvage Yard NPL Site Administrative Record Index
B. Pinette's Salvage Yard NPL Site Responsiveness Summary
C. Pinette's Salvage Yard Site-Specific PCB Soil Risk Calculations and Cleanup Level
D. Pinette's Salvage Yard NPL Site State of Maine Declaration of Concurrence Letter

DECLARATION FOR THE RECORD OF DECISION

SITE NAME AND LOCATION

Pinette's Salvage Yard
Washburn, Aroostook County, Maine

STATEMENT OF PURPOSE

This decision document presents the selected remedial action for the Pinette's Salvage Yard site, located in Washburn, Maine. This decision was developed in accordance with the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), as amended by the Superfund Amendments and Reauthorization Act of 1986 (SARA), and, to the extent practicable, the National Contingency Plan (NCP); 40 CFR Part 300 et seq. (1988). The Regional Administrator has been delegated the authority to approve this Record of Decision.

The State of Maine has concurred on the selected remedy and determined, through a detailed evaluation, that the selected remedy is consistent with Maine laws and regulations.

STATEMENT OF BASIS

This decision is based on the administrative record compiled for this site which was developed in accordance with Section 113(k) of CERCLA. The administrative record is available for public review at the Washburn Town Offices in Washburn, Maine, and at the EPA Region I Waste Management Division Record Center in Boston, Massachusetts. The attached index (Attachment A to the ROD) identifies the items which comprise the administrative record upon which the selection of the remedial action is based.

DESCRIPTION OF THE SELECTED REMEDY

The selected remedy for the Pinette's Salvage Yard site is a comprehensive approach for complete site remediation of the principal threats posed by the site. This approach includes both a source control and management of migration component, as described below:

The Source Control Component entails:

Off-site Incineration of PCB-Contaminated Soils Greater Than 50 ppm; and On-site Solvent Extraction of Additional PCB- and Organic-Contaminated Soils.

EPA will address soil and, to the extent technically practicable, groundwater contamination at the site by excavating and treating a total of approximately 2,000-2,200 cubic yards of contaminated soils in order to meet the target cleanup goals established for this site.

More specifically, those soils contaminated with greater than 50 parts per million (ppm) PCBs will be excavated and transported to a thermal destruction incineration facility located off-site. The extremely high temperatures attained during incineration should destroy at least 99.9999% of all the organic contaminants contained in this soil.

Soils containing between 5 and 50 ppm PCBs, and soils contaminated with other organic chemicals will also be excavated and treated. These soils will be treated at the Pinette's site using a solvent extraction technology. This process involves the use of a solvent to remove PCBs and other organic chemicals from the soil. The solvent extraction process is expected to achieve at least a 95 to 99% reduction in the original concentration of contaminants in the soil at the Pinette's site.

EPA will continuously monitor the soils after treatment to ensure that all cleanup criteria are met. If soils remaining after the initial extraction step do not meet EPA's target cleanup goals, these same soils will be re-introduced into the solvent extraction process. The liquid PCBs and other organic chemicals extracted from the soil by this process will be collected and transported off-site to a TSCA-licensed incineration facility. Residual water from the process will be pumped into storage tanks for treatment by a portable carbon unit located on-site or by some other acceptable means of treatment. During on-site solvent extraction, exhaust gases from the process will be treated by air pollution control devices to ensure that appropriate health and safety and air quality requirements are being met.

Prior to full-scale implementation of the solvent extraction process on the Pinette's site, a pilot test will be conducted to establish the optimum operational settings for the extraction of those contaminants specific to the Pinette's site, and to verify that soil residues from the process are nonhazardous. After the pilot studies determine the optimum treatment scheme, full-scale operation will proceed. After the soil residues from the process are found to be nonhazardous, they will be placed back into the on-site excavated areas.

Additionally, removal of PCB-contaminated surface soils containing greater than 1 ppm (but less than 5 ppm) to a minimum depth of 10 inches will occur at the site. This volume of soil (approximately 500 cubic yards) will be moved to the areas resulting from the prior excavation of the original 2,000-2,200 cubic yards described above. These soils will be consolidated into the on-site excavation, followed by the replacement of those nonhazardous soil residues resulting from the on-site solvent extraction process. All site areas, including those undergoing this additional consolidation activity, will be covered with new native soil containing less 1 ppm PCBs and revegetated.

Finally, access to the site will be temporarily restricted using fences and by posting warning signs during the excavation and treatment activities performed; any junk vehicles/debris hindering site remediation activities will be removed from the site; institutional controls, and long-term monitoring of the salvage yard to detect future contaminant releases to the environment will be established; public education programs will be conducted; additional groundwater monitoring wells will be installed; disposal/treatment of wastes generated during the remediation activities will occur; and on-site surface water and sediments will be monitored after overall site remediation is completed.

The Management of Migration Component includes:

Expedited Groundwater Collection and Carbon Adsorption Treatment.

EPA will actively address groundwater contamination at the site by utilizing groundwater collection and carbon adsorption treatment. The system will first entail construction of shallow interceptor trenches and deep extraction wells to collect the contaminated groundwater. Collected groundwater will then be pumped through a granular filter to remove suspended/colloidal particulate matter.

Following this preliminary filtration step, the groundwater will be treated by carbon adsorption, which uses activated carbon to remove the organic contaminants found in the groundwater. All treated groundwater will then be discharged back into the shallow aquifer through the use of shallow recharge trenches. The entire aquifer collection system should extract approximately eight to sixteen gallons per minute for approximately two years.

Additionally, EPA will recommend the establishment of institutional controls on the site groundwater. These recommended controls would include a complete prohibition on the use of the on-site groundwater for drinking water purposes both during and, if necessary, following overall site remediation.

DECLARATION

The selected remedy is protective of human health and the environment, attains all Federal and most State requirements that are applicable or relevant and appropriate (ARAR) to this remedial action and is cost-effective. This remedy will however, require a CERCLA Section 121(d)(4)(C) waiver from a State ARAR due to the technical impracticability from an engineering perspective of collecting particulate-bound PCB's from the groundwater at the site. This remedy satisfies the statutory preference for remedies that employ treatment and that reduce the toxicity, mobility or volume as a principal element and utilize permanent solutions and alternative treatment technologies to the maximum extent practicable.

Additionally, because the remedy could likely result in hazardous substances (PCBs) remaining in groundwater on-site above health-based levels, a review will be conducted (at a minimum) within five years after commencement of the remedial action to ensure that the remedy continues to provide adequate protection of human health and the environment.

May 30, 1989
Date

Paul G. Keough Acting
Regional Administrator

SITE NAME: Pinette's Salvage Yard
LOCATION: Washburn, Aroostook County, Maine
DESCRIPTION:

The Pinette's Salvage Yard (PSY) site is located on Gardner Creek Road (a.k.a. Wade Road) approximately one mile southwest of the town of Washburn, Aroostook County, Maine, in the northeastern corner of the state (see Figures 1-1 and 1-2). The town of Washburn has a current estimated population of 2,200 residents, and consists of various family-owned and operated stores, an elementary school and high school, Town Hall and medical center.

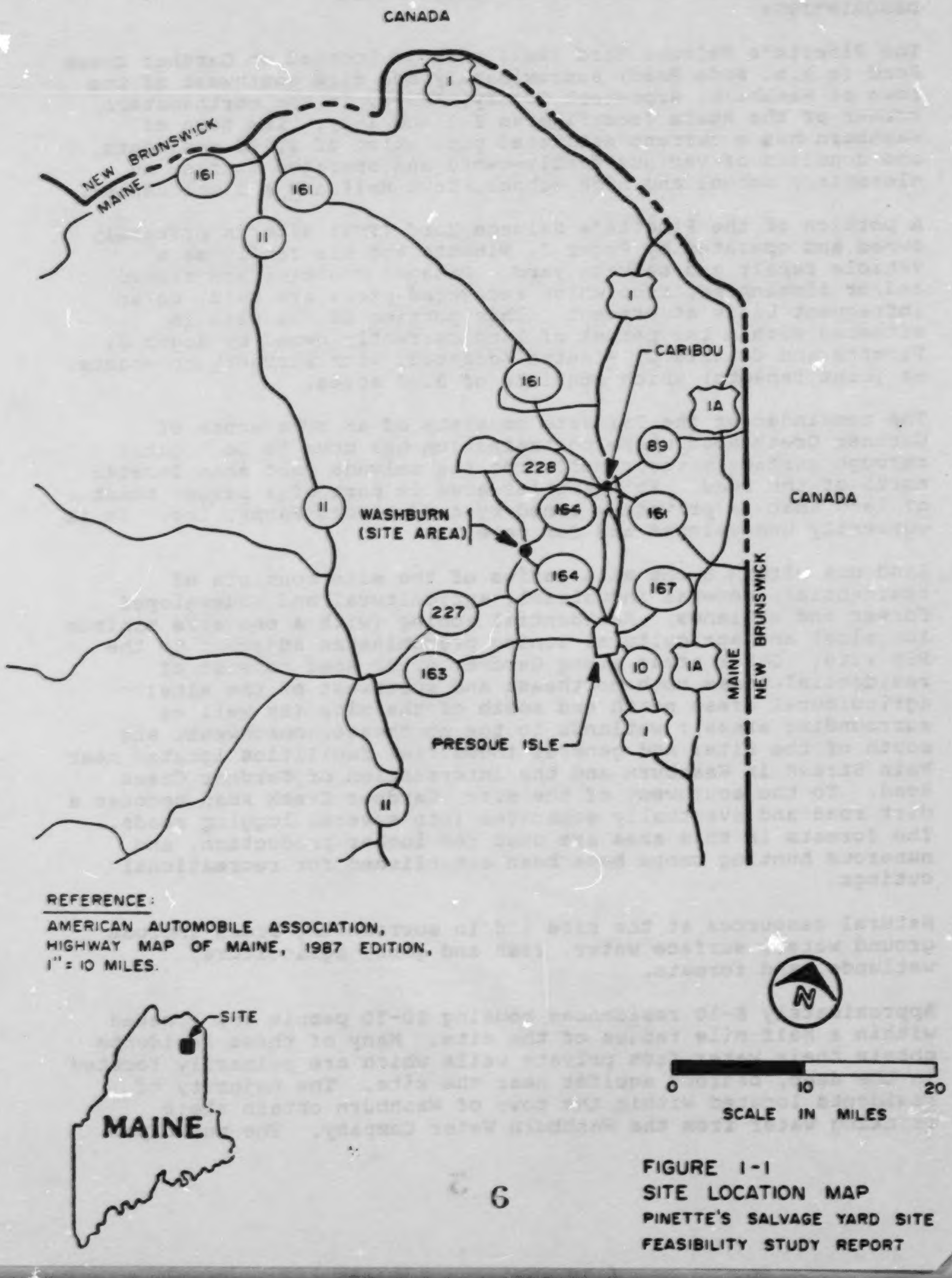
A portion of the Pinette's Salvage Yard (PSY) site is privately owned and operated by Roger J. Pinette and his family as a vehicle repair and salvage yard. Damaged vehicles are stored and/or dismantled, from which recovered parts are sold, on an infrequent basis at present. This portion of the site is situated within the parcel of land currently owned by Roger J. Pinette and Cynthia C. Pinette (granted, with warranty covenants, as joint tenants) which consists of 9.45 acres.

The remainder of the PSY site consists of an area south of Gardner Creek Road where contamination has come to be located through surface water runoff from the salvage yard area located north of the road. This smaller area is part of a larger tract of land that is privately owned by A.E. Albert Farms, Inc. It is currently undeveloped and for sale.

Land use within a one mile radius of the site consists of residential, general industrial, agricultural and undeveloped forest and wetlands. Residential zoning (with a one acre minimum lot size) and agricultural zoning predominates adjacent to the PSY site. Other areas along Gardner Creek Road consist of residential homes both northeast and southwest of the site; agricultural areas north and south of the site (as well as surrounding areas); wetlands to the northeast, northwest, and south of the site; and general industrial facilities located near Main Street in Washburn and the intersection of Gardner Creek Road. To the southwest of the site, Gardner Creek Road becomes a dirt road and eventually separates into several logging roads. The forests in this area are used for lumber production, and numerous hunting camps have been established for recreational outings.

Natural resources at the site and in surrounding areas include ground water, surface water, fish and game, agriculture, wetlands, and forests.

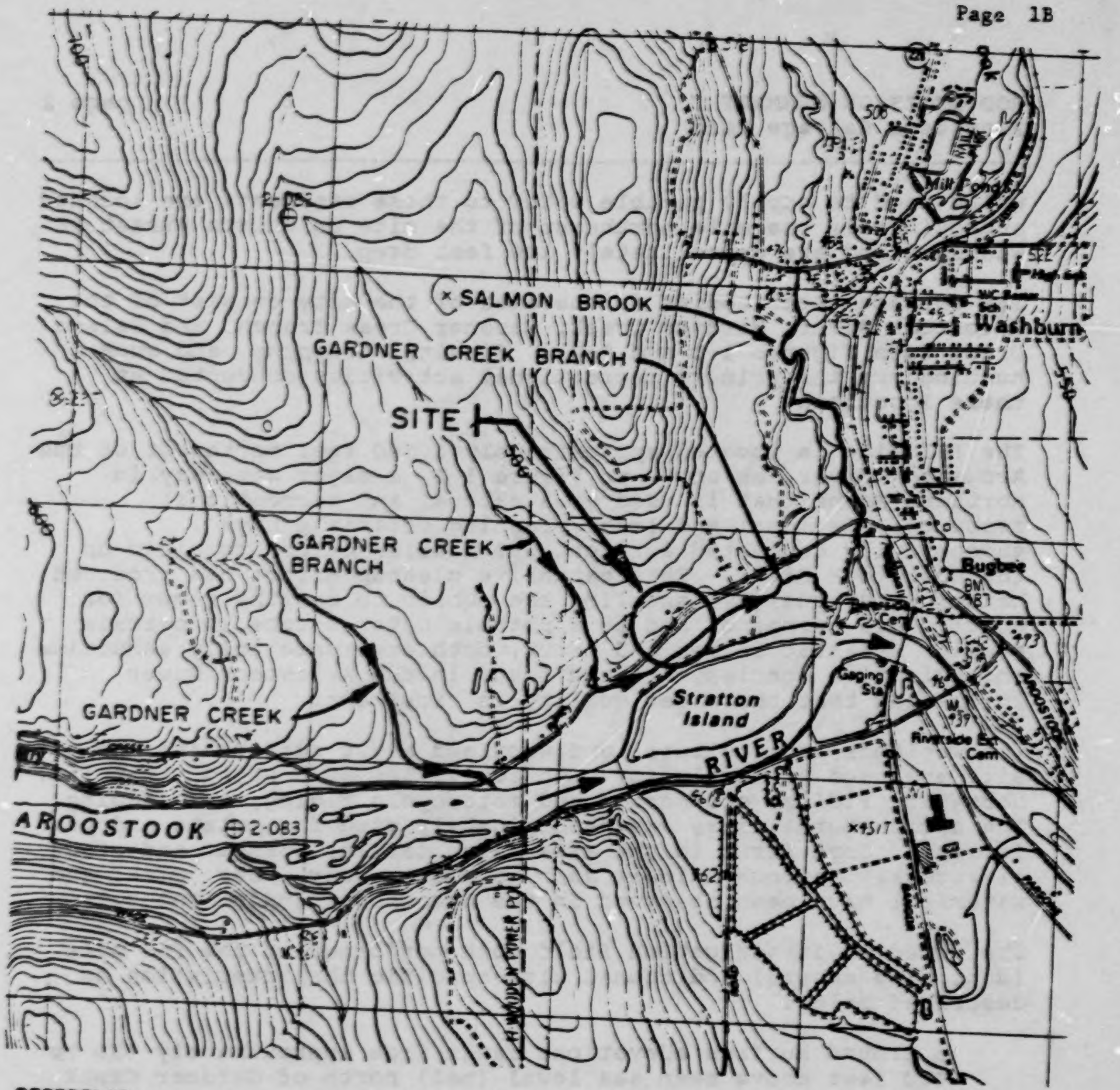
Approximately 8-10 residences housing 20-30 people are located within a half mile radius of the site. Many of these residents obtain their water from private wells which are primarily located in the deep, bedrock aquifer near the site. The majority of residents located within the town of Washburn obtain their drinking water from the Washburn Water Company. The municipal


CANADA
NEW BRUNSWICK
MAINE
161
161
11
1
161
CARIBOU
1A
89
228
CANADA
11
164
161
WASHBURN
(SITE AREA)
164
167
227
163
10
1A
MAINE
NEW BRUNSWICK
PRESQUE ISLE
1
11
N
0
10
20
SCALE IN MILES
SITE
MAINE

REFERENCE:

AMERICAN AUTOMOBILE ASSOCIATION,
HIGHWAY MAP OF MAINE, 1987 EDITION,
1" = 10 MILES.

FIGURE 1-1
SITE LOCATION MAP
PINETTE'S SALVAGE YARD SITE
FEASIBILITY STUDY REPORT


SALMON BROOK
GARDNER CREEK BRANCH
SITE
GARDNER CREEK BRANCH
GARDNER CREEK
Stratton Island
RIVER
AROOSTOOK
2-083
Washburn
Mill Pond
Bugbee
Gaging Sta
Riverside Cem
506
550
493

REFERENCE:

U.S.G.S. 7.5' TOPOGRAPHIC QUADRANGLE MAP
WASHBURN, MAINE. DATE OF PHOTOGRAPHY
EDITED: 1984, SCALE: 1" = 2000'.

LEGEND:

→ DIRECTION OF FLOW

N
0
2000
4000
SCALE IN FEET

FIGURE 1-2
SITE VICINITY MAP
PINETTE'S SALVAGE YARD SITE
FEASIBILITY STUDY REPORT

wells used to supply potable water to these residents are located approximately one mile northeast of the site on Church Street in Washburn and are approximately 100 feet deep.

The surface water bodies in the area of the site consist of the Aroostook River, Gardner Creek, Gardner Creek Branch, and Salmon Brook (see Figures 1-1 and 1-2). Fishing, trapping, and duck hunting are the primary recreational activities conducted at these locations.

The PSY site is located approximately 1,500 feet northwest of the Aroostook River, as shown on Figure 1-2, a major waterway in northern Maine that is used as a natural and recreational resource. Regional and local planning officials have successfully completed a recent $60 million effort to clean up the Aroostook River. This extensive cleanup effort has produced better water quality, enabling the public to use the river for boating and swimming, and as a potable water source in certain areas. Atlantic salmon and trout, both environmentally sensitive and selective species, are now found in the Aroostook River indicating that the water quality is excellent.

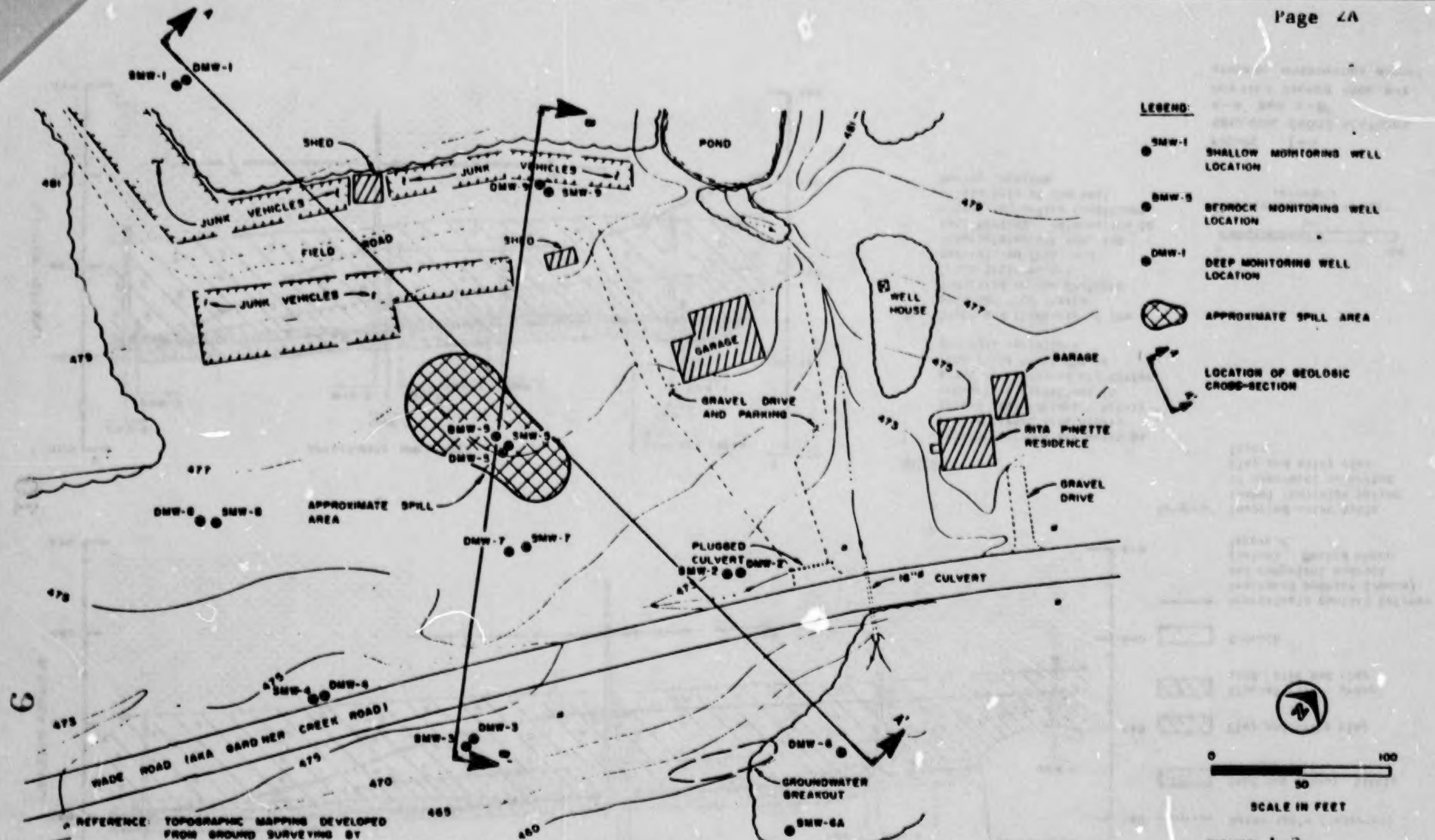
The wetlands, agricultural and woodland areas surrounding the site are used primarily for such activities as hunting, trapping, horseback riding, snowmobile and motorcycle riding, and camping. The agricultural areas are predominately used for potato and pea farming. Some farms in the area raise cattle, horses, and other livestock. Various animals such as moose, bear, deer, mink, and waterfowl have been observed in the areas surrounding the site.

The remedial investigation field work performed at the PSY site identified several additional site-specific characteristics as described below:

o ground surface elevations range from approximately 480 to 470 feet above mean sea level (msl) north of Gardner Creek Road, and 475 feet above msl or less south of the road where the topography becomes steeper;

o surface water drainage flows south to southeast on the western portion of the site, and approximately due east on the eastern portion of the site prior to discharging into individual culverts located under Gardner Creek Road;

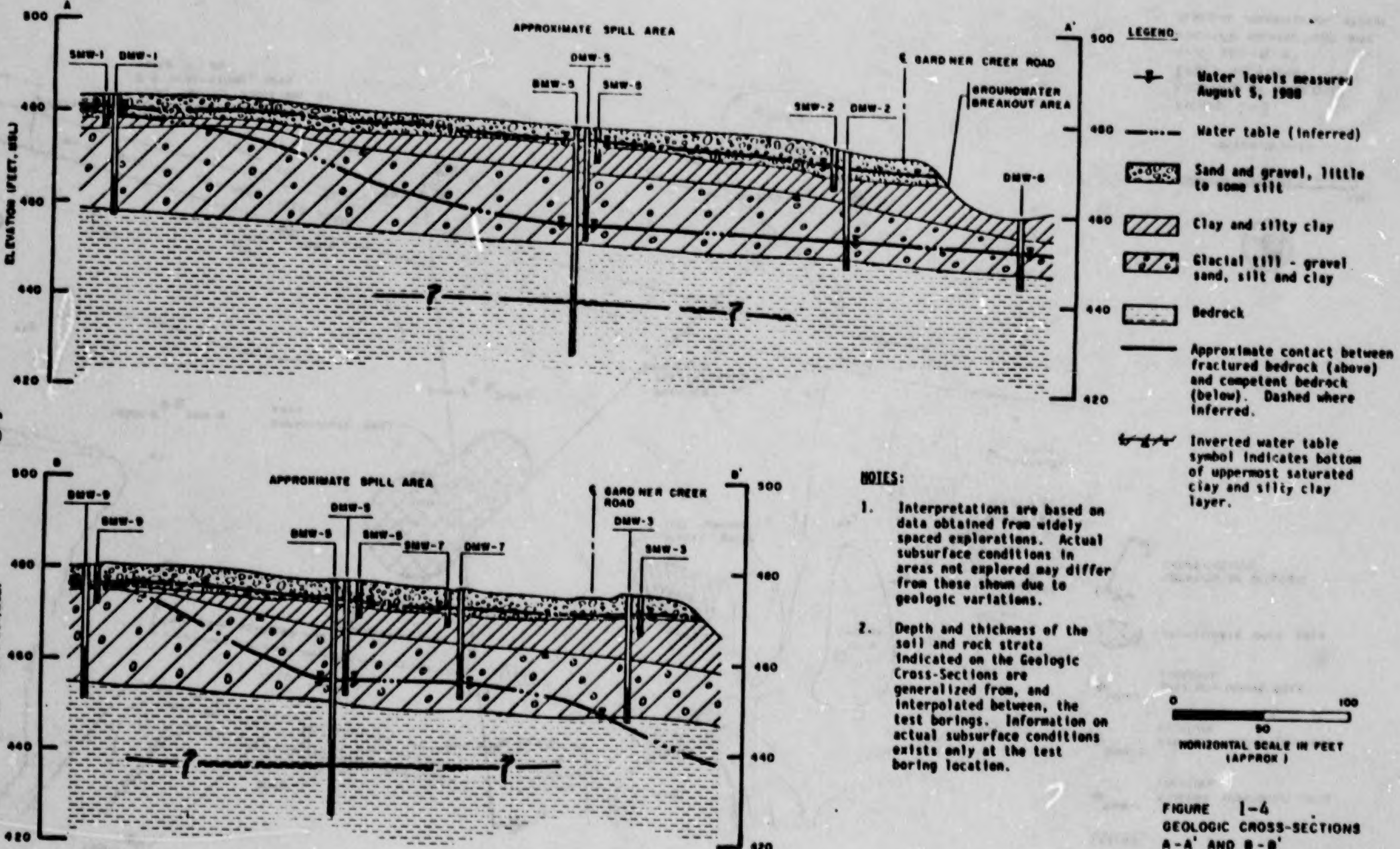
o four (4) distinct lithologic soil units exist (see Figures 1-3 and 1-4) including: surface soils (alluvium), a clay/silt confining unit, a sequence of glacial till/glacial outwash, and a bedrock unit (consisting of an upper, weathered and fractured zone, and a deeper, less fractured bedrock zone);


SMW-1
DMW-1
A
B
SHED
POND
JUNK VEHICLES
DMW-9
SMW-9
481
479
FIELD ROAD
SHED
JUNK VEHICLES
WELL HOUSE
477
GARAGE
GARAGE
GRAVEL DRIVE AND PARKING
475
RITA PINETTE RESIDENCE
GRAVEL DRIVE
DMW-5
SMW-5
DMW-5
477
DMW-8
SMW-8
APPROXIMATE SPILL AREA
DMW-7
SMW-7
PLUGGED CULVERT
SMW-2
DMW-2
18" CULVERT
475
475
SMW-4
DMW-4
475
WADE ROAD (AKA GARDNER CREEK ROAD)
SMW-3
DMW-3
B'
A'
DMW-6
GROUNDWATER BREAKOUT
SMW-6A
475
470
465
460
455
LEGEND:
SMW-1 SHALLOW MONITORING WELL LOCATION
BMW-5 BEDROCK MONITORING WELL LOCATION
DMW-1 DEEP MONITORING WELL LOCATION
APPROXIMATE SPILL AREA
LOCATION OF GEOLOGIC CROSS-SECTION
N
0
50
100
SCALE IN FEET

REFERENCE: TOPOGRAPHIC MAPPING DEVELOPED FROM GROUND SURVEYING BY D R BLACKSTONE, 1988 SCALE 1" : 20'

FIGURE 1-3
LOCATION OF GEOLOGIC CROSS-SECTIONS A-A' AND B-B'
PINETTE'S SALVAGE YARD SITE
REMEDIAL INVESTIGATION REPORT

Reproduced from best available copy.


A
A'
B
B'
500
480
460
440
420
ELEVATION (FEET, MSL)
APPROXIMATE SPILL AREA
SMW-1
DMW-1
DMW-5
BMW-5
SMW-5
SMW-2
DMW-2
DMW-6
℄ GARDNER CREEK ROAD
GROUNDWATER BREAKOUT AREA
?
BMW-9
SMW-9
DMW-8
BMW-8
SMW-8
SMW-7
DMW-7
DMW-3
SMW-3
℄ GARDNER CREEK ROAD
LEGEND
Water levels measured August 5, 1988
Water table (inferred)
Sand and gravel, little to some silt
Clay and silty clay
Glacial till - gravel sand, silt and clay
Bedrock
Approximate contact between fractured bedrock (above) and competent bedrock (below). Dashed where inferred.
Inverted water table symbol indicates bottom of uppermost saturated clay and silty clay layer.
0
50
100
HORIZONTAL SCALE IN FEET (APPROX)

NOTES:

1. Interpretations are based on data obtained from widely spaced explorations. Actual subsurface conditions in areas not explored may differ from those shown due to geologic variations.

2. Depth and thickness of the soil and rock strata indicated on the Geologic Cross-Sections are generalized from, and interpolated between, the test borings. Information on actual subsurface conditions exists only at the test boring location.

FIGURE 1-4
GEOLOGIC CROSS-SECTIONS
A-A' AND B-B'
PINETTE'S SALVAGE YARD SITE
REMEDIAL INVESTIGATION REPORT

o wetland areas consist of the eastern pond/drainage ditch, the western pond and those areas west-northwest of the site, the "groundwater breakout" area south of Gardner Creek Road, and a large area located adjacent to Gardner Creek Road approximately 300 feet east-southeast of the site;

o two (2) distinct aquifers (shallow overburden and glacial till/fractured bedrock) are separated by an intervening clay layer;

o the clay layer separating the two aquifers is found at a depth of 2 to 6 feet below the ground surface, extends to depths of up to 12 to 16 feet, and varies in thickness from 2 to 3 feet in the northern portion of the site (where it may become discontinuous) to greater than 10 feet in the southern portion of the site north of Gardner Creek Road;

o the clay unit has low permeability (approximately 2x10-7 cm/sec) relative to the overlying alluvial aquifer, and therefore is an aquitard allowing limited downward movement of groundwater and contaminant transport;

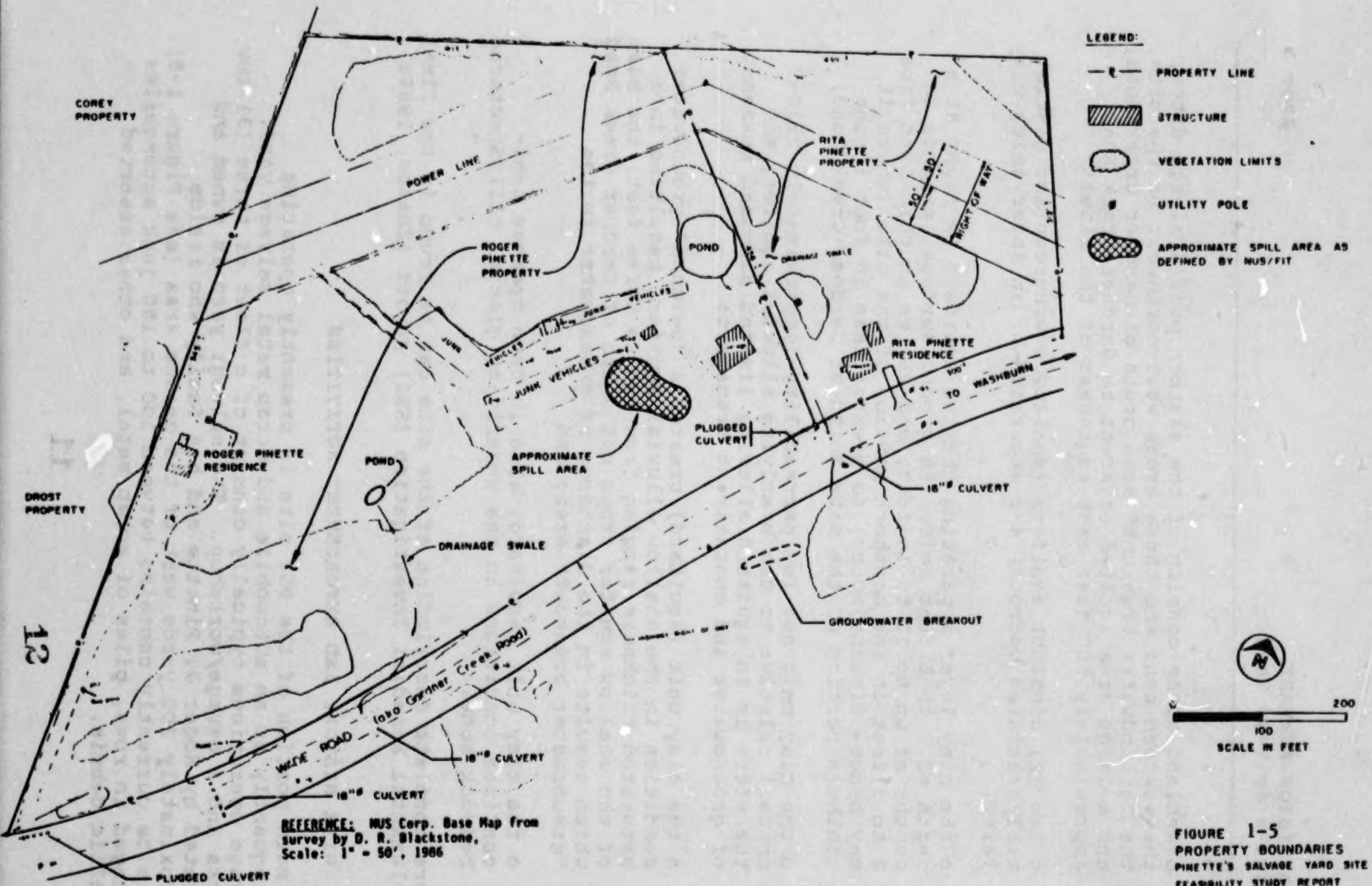
o the clay unit (aquitard) creates a "perched" groundwater condition in the shallow alluvial aquifer, resulting in a saturated thickness ranging from two to three feet; the base of the shallow aquifer crops out south of Gardner Creek Road which results in the discharge of groundwater in the "groundwater breakout" area; and

o the clay unit (aquitard) also in turn creates semi-confined conditions in the underlying glacial till/fractured bedrock zone.

A more complete description of the site can be found in the Final Supplemental Remedial Investigation (SRI) report (Ebasco, 1989a).

II. SITE HISTORY AND ENFORCEMENT ACTIVITIES

The main portion of the PSY site is presently operating infrequently as an automobile and scrap metal salvage yard. Salvage operations typically consist of a fleet of three (3) tow trucks and a garage/workshop. The salvage yard is owned and operated by Roger J. Pinette and his family who reside approximately 200 yards west of the garage area (see Figure 1-5). The site currently contains between 100 to 150 junk automobiles arranged in rows, piles of scrap metal, and other assorted metallic debris.


LEGEND:
PROPERTY LINE
STRUCTURE
VEGETATION LIMITS
UTILITY POLE
APPROXIMATE SPILL AREA AS DEFINED BY NUS/FIT
COREY PROPERTY
DROST PROPERTY
POWER LINE
ROGER PINETTE PROPERTY
ROGER PINETTE RESIDENCE
RITA PINETTE PROPERTY
RITA PINETTE RESIDENCE
RIGHT OF WAY
30'
50'
POND
POND
DRAINAGE SWALE
JUNK VEHICLES
JUNK VEHICLES
JUNK VEHICLES
APPROXIMATE SPILL AREA
PLUGGED CULVERT
18"Ø CULVERT
TO WASHBURN
GROUNDWATER BREAKOUT
DRAINAGE SWALE
WADE ROAD
(aka Gardner Creek Road)
18"Ø CULVERT
18"Ø CULVERT
PLUGGED CULVERT
0
100
200
SCALE IN FEET

REFERENCE: NUS Corp. Base Map from survey by D. R. Blackstone, Scale: 1" = 50', 1986

FIGURE 1-5
PROPERTY BOUNDARIES
PINETTE'S SALVAGE YARD SITE
FEASIBILITY STUDY REPORT

A. Remedial History

In June 1979, three electrical transformers from Loring Air Force Base located near Limestone, Maine, were removed from the base under a written agreement with a private electrical contractor hired by the base. Allegedly, the transformers were brought to the PSY site where they apparently ruptured while being removed from the delivery vehicle which had transported them. Approximately 900 to 1,000 gallons of dielectric fluid containing polychlorinated biphenyls (PCBs) spilled directly onto the ground. The approximate spill area is shown on Figure 1-5.

After being contacted by the electrical contractor in November 1979, the Maine Department of Environmental Protection (DEP) determined in April 1980 that the site was contaminated with PCBs and associated volatile organic contaminants (VOC's). Additional sampling by the Maine DEP in August 1981 and the USEPA in May 1982 confirmed the presence of PCB contamination at the site. In December 1982, the site was placed on the National Priorities List (NPL) making it eligible to receive federal Superfund monies under CERCLA for the conduct of investigations and cleanup actions.

On October 4, 1983, EPA Region I authorized an Immediate Removal Action (IRA) for the PSY site. Approximately 1,050 tons (800 cu. yds.) of PCB-contaminated soil and assorted debris were removed for disposal during the period from October 4 to November 4, 1983. The IRA was performed to excavate those soils grossly contaminated by PCBs (i.e., soils containing 50 parts per million [50 ppm] or greater of PCBs, as determined by on-site analysis). Those soils that were excavated were then transported to the Model City, New York secure hazardous waste landfill facility.

In 1985, a Deletion Remedial Investigation (DRI) was performed at the PSY site to determine if any residual PCB contamination existed and whether this residual contamination was reduced sufficiently to warrant the deletion of the site from the National Priorities List (NPL). This investigation resulted in the determination by the USEPA, in consultation with the Maine DEP, that the site was not suitable for deletion from the NPL. The results of the DRI were released to the public in October 1987.

Based on the levels of residual PCB contamination discovered during the DRI, the USEPA, in consultation with the Maine DEP, determined that a Supplemental Remedial Investigation (SRI) was warranted at the PSY site. The Supplemental RI was performed using a two-phased approach. The Phase I field investigations were performed from September 1987 through November 1987. The Phase I results were used to further define the scope of the

Phase II investigation. The purpose of the Phase II investigation was to address any outstanding data requirements and objectives so that the data would be of sufficient quality and quantity to support the preparation of a Feasibility Study (FS). Phase II field activities were completed in November 1988. The Final Supplemental Remedial Investigation and Public Health Evaluation Report (Ebasco, 1989a), and the Draft Final Feasibility Study Report (Ebasco, 1989b) were distributed for public comment in March 1989. A more detailed description of the site history and response actions undertaken at the site are presented in these reports.

B. Enforcement History

On March 6, 1989, EPA notified four (4) parties who owned or operated the facility, generated hazardous substances that were shipped to the facility, arranged for the disposal of hazardous substances at the facility, or transported hazardous substances to the facility of their potential liability with respect to the site.

In addition, technical comments presented by the PRPs during the public comment period were submitted in writing, and are included in the Administrative Record. To date, special notice has not been issued in this case.

III. COMMUNITY RELATIONS

Throughout the site's history, community concern and involvement has been low. EPA has kept the community and other interested parties apprised of site activities through an informational meeting, fact sheets, press releases and a public meeting. Additionally, EPA has conducted several television interviews and has been available to the public during all site visits.

In June 1988, EPA released a community relations plan which outlined a program to address community concerns and keep citizens informed about and involved in the remedial activities being performed at the site.

The Agency published a notice and brief analysis of the Proposed Plan for the PSY site in the local newspapers on March 8, 1989 and made the Proposed Plan, Final Supplemental Remedial Investigation and Draft Final Feasibility Study reports available to the public through the Administrative Record located at the Washburn Town Offices and at EPA's offices in Boston. It should be noted that notice of the waiver from compliance with the State of Maine's groundwater Maximum Exposure Guideline (MEG) for PCBs was included in the Proposed Plan for public comment.

On March 14, 1989, EPA held an informational public meeting to discuss the results of the Supplemental Remedial Investigation and the cleanup alternatives presented in the Draft Final Feasibility Study, and to present the Agency's Proposed Plan. The Agency also answered questions from the public during this meeting.

From March 15, 1989 to April 14, 1989, the Agency held a 30-day public comment period to accept public comment on the alternatives presented in the Draft Final Feasibility Study and the Proposed Plan, and on any other documents previously released to the public. On April 11, 1989, the Agency held a public hearing to accept any oral comments. A transcript of this hearing, as well as written comments received at the hearing, and the Agency's response to these comments are included in the attached responsiveness summary (Attachment B to this ROD).

IV. SCOPE AND ROLE OF RESPONSE ACTION

The selected remedy was developed by combining components of different source control alternatives and a management of migration alternative to obtain a comprehensive approach for overall site remediation. In summary, this response action will, to the extent practicable, address the principal threats posed by the site through excavation and treatment of approximately 2,000-2,200 cubic yards of contaminated soils, and collection and treatment of contaminated groundwater on the site.

V. SITE CHARACTERISTICS

The Supplemental Remedial Investigation (SRI) performed at the PSY site from September 1987 through November 1988 was designed to attain the following objectives: (1) conduct a comprehensive characterization of the nature and extent of contamination in the various media at the site; (2) perform an evaluation of present and future health risks and environmental impacts resulting from the contamination at the site; and (3) collect sufficient data to be used in preparing a Feasibility Study (FS) to screen potential remedial technologies and assemble and evaluate potential remedial alternatives for the site.

Chapter 1 of the Draft Final Feasibility Study (Ebasco, 1989b) contains an overview of the results obtained from the SRI, while further details regarding sample locations, sample methods and sample analysis are provided in the Final Supplemental Remedial Investigation and Public Health Evaluation report (Ebasco, 1989a). The significant findings of the remedial investigation are summarized below.

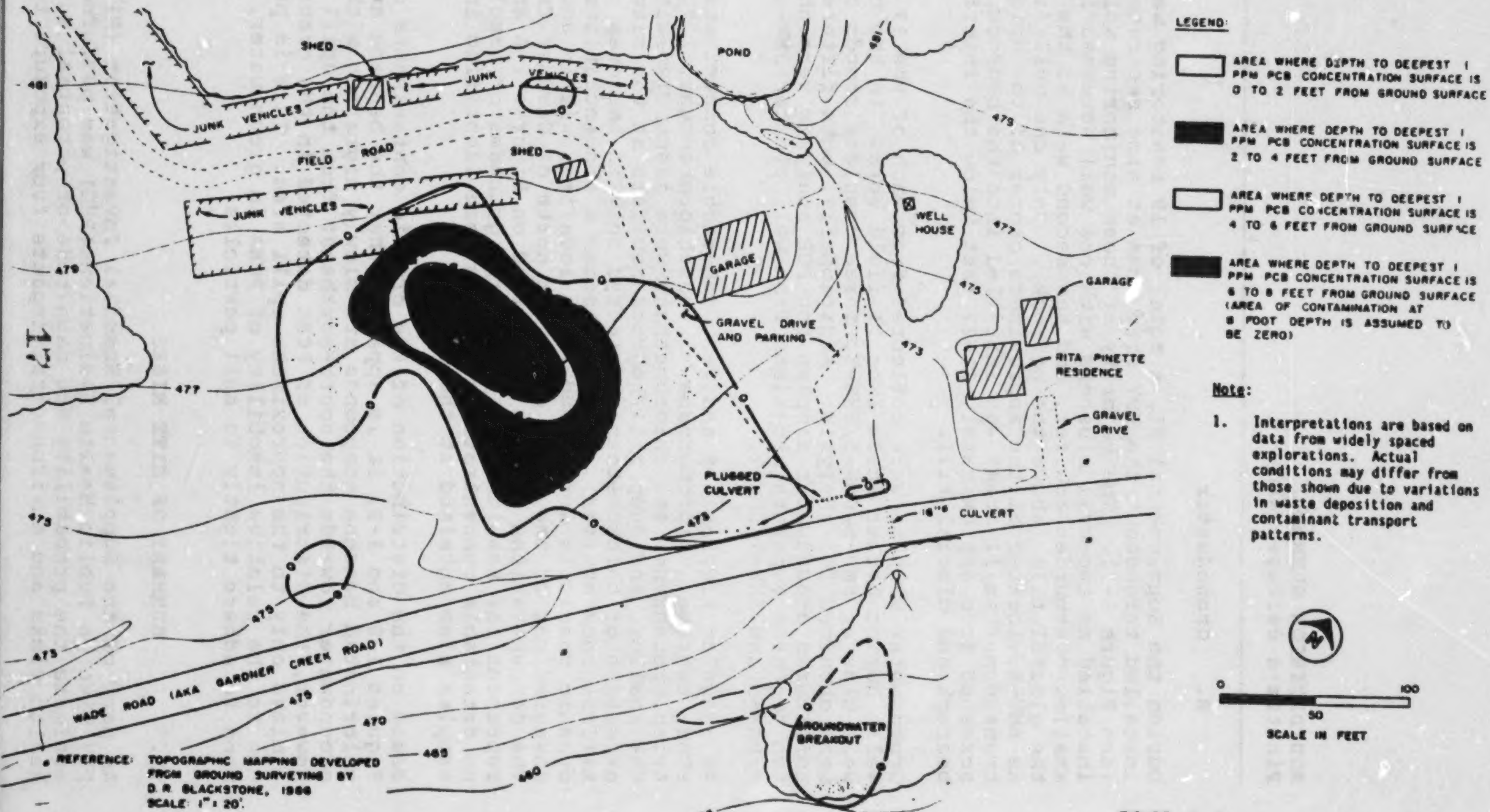
A. Soil

Soil sampling during both Phase I and II of the Supplemental RI field work revealed the presence of a wide range of PCB concentrations in the surface (0 to 6 inch interval) and subsurface (6 inch to 6 foot interval) soils. These contaminated soils were predominantly found to be confined to an elliptical area measuring approximately 150 feet by 80 feet located north of Gardner Creek Road (see Figure 1-6), and in the same general area as the original transformer dielectric fluid spill (see Figure 1-5).

The maximum surface soil concentration of PCBs within the area north of Gardner Creek Road was 92 parts per million (ppm) at a location approximately 220 feet north of the road. The overall geometric mean surface soil concentration from the approximately 30 surface soil samples obtained from the area north of the road was 2.1 ppm. Maximum subsurface soil concentration of PCBs was 11,000 ppm found at a depth interval of 6 inches to 2 feet below the ground surface, and also located approximately 200 feet north of the road.

The migration (transport) of PCBs identified in soils located north of Gardner Creek Road has apparently occurred, to a limited extent, due to the surface water runoff/drainage and the topographic features found at the site. This surface migration (transport) of PCBs has resulted in some contamination to the south of the road within the approximate area of the wetland/groundwater breakout, as shown of Figure 1-6. The PCB contamination in this area is restricted to the top 0 to 6 inches of soil which covers an elliptical area measuring approximately 50 feet by 90 feet. The maximum PCB concentration found in this area was 12 ppm, while the geometric mean concentration of 10 samples was 0.44 ppm. No subsurface soils (6 inches or deeper) were found to contain any PCBs greater than 1 ppm.

Additional organic contaminants of concern found in soils at the site included chlorobenzene, 1,4-dichlorobenzene, 1,2,4-trichlorobenzene, benzene, and chloromethane. These organic compounds were predominantly detected in the subsurface, saturated soils at a depth of 2 to 6 feet, and primarily within the same elliptical area north of Gardner Creek Road where the PCBs in both the surface and subsurface soils were identified. The maximum concentration of these organic compounds was 260 parts per billion (ppb), chlorobenzene; 5.1 ppm, 1,4-dichlorobenzene; 510 ppm, 1,2,4-trichlorobenzene; 18 ppb, benzene; and 58 ppb, chloromethane.


LEGEND:
AREA WHERE DEPTH TO DEEPEST 1 PPM PCB CONCENTRATION SURFACE IS 0 TO 2 FEET FROM GROUND SURFACE
AREA WHERE DEPTH TO DEEPEST 1 PPM PCB CONCENTRATION SURFACE IS 2 TO 4 FEET FROM GROUND SURFACE
AREA WHERE DEPTH TO DEEPEST 1 PPM PCB CONCENTRATION SURFACE IS 4 TO 6 FEET FROM GROUND SURFACE
AREA WHERE DEPTH TO DEEPEST 1 PPM PCB CONCENTRATION SURFACE IS 6 TO 8 FEET FROM GROUND SURFACE (AREA OF CONTAMINATION AT 8 FOOT DEPTH IS ASSUMED TO BE ZERO)
SHED
JUNK VEHICLES
POND
JUNK VEHICLES
FIELD ROAD
SHED
JUNK VEHICLES
GARAGE
WELL HOUSE
GARAGE
GRAVEL DRIVE AND PARKING
RITA PINETTE RESIDENCE
GRAVEL DRIVE
PLUGGED CULVERT
16"⌀ CULVERT
GROUNDWATER BREAKOUT
WADE ROAD (AKA GARDNER CREEK ROAD)
481
479
477
475
473
470
465
460
455
0
SCALE IN FEET
0
50
100
REFERENCE: TOPOGRAPHIC MAPPING DEVELOPED FROM GROUND SURVEYING BY D.R. BLACKSTONE, 1986 SCALE: 1" = 20'.

Note:

1. Interpretations are based on data from widely spaced explorations. Actual conditions may differ from those shown due to variations in waste deposition and contaminant transport patterns.

FIGURE 1-6
EXTENT AND DEPTH OF PCB CONTAMINATED SOIL (1 PPM OR GREATER)
PINETTE'S SALVAGE YARD SITE
FEASIBILITY STUDY REPORT

B. Groundwater

During the Supplemental RI, a total of 19 monitoring wells were installed throughout the PSY site area at nine separate locations (see Figure 1-7). The majority of these monitoring wells were installed as two-well clusters with one well screened in the shallow overburden aquifer, and the second well at the base of the glacial till (above the bedrock). Only one well (identified as BMW-5, located at the approximate center of the original transformer spill area) was installed into the bedrock, and screened from approximately 12-27 feet below the interface of the bedrock and glacial till.

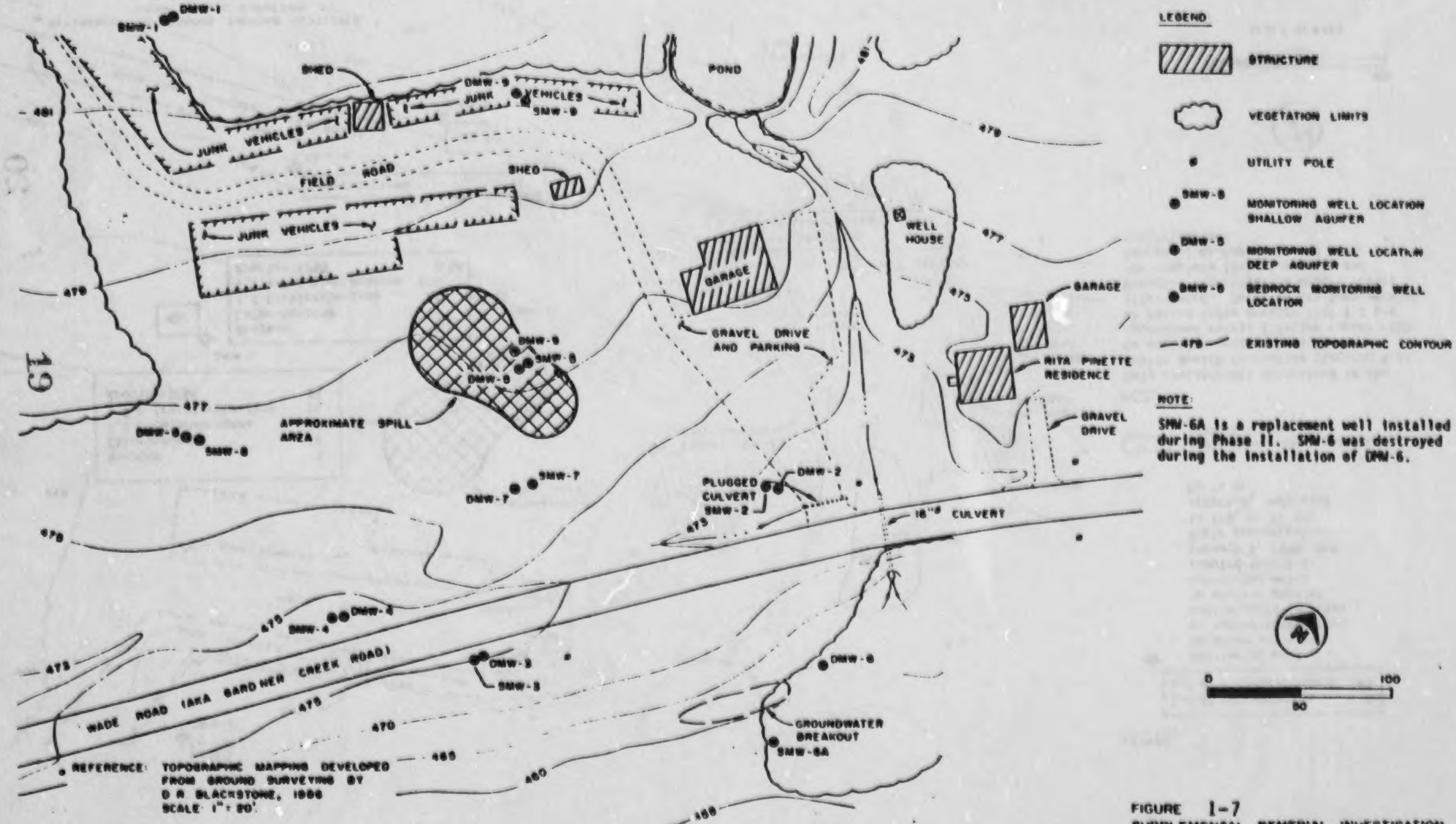
Groundwater samples were collected from each of the 19 monitoring wells during either Phase I or II field work. In the case of well cluster SMW-5/DMW-5/BMW-5, three complete rounds of samples were obtained for analysis. Additionally, both filtered and unfiltered groundwater samples for PCB analysis were obtained on two to three separate occasions from well cluster SMW-5/DMW-5/BMW-5 and SMW-7/DMW-7.

As shown of Figures 1-8 and 1-9, detectable concentrations of PCBs, benzene, chlorobenzene, 1,4-dichlorobenzene, 1,2,4-trichlorobenzene, and chloromethane were identified within both the shallow, and deep till/bedrock aquifers at the site (with the exception of chloromethane, detected only in the deep till/bedrock aquifer). These detectable concentrations of organic chemicals were found to be localized within and slightly downgradient of the spill area, but north of Gardner Creek Road. The concentrations of PCBs identified on Figures 1-8 and 1-9 represent the results from unfiltered groundwater samples, since no detectable concentrations of PCBs were identified in filtered samples also obtained at the site.

Based on the distribution of the organic contaminants depicted in Figures 1-8 and 1-9, it is apparent that the benzene and chlorinated benzene compounds are slowly migrating with the groundwater towards the south-southeast from the spill area. However, the distribution of PCBs detected in the groundwater is limited only to the approximate spill area. This is principally due to the relative immobility of PCBs in groundwater, since PCBs tend to adhere tightly to soil particles.

VI. SUMMARY OF SITE RISKS

As part of the Supplemental Remedial Investigation (RI) for the PSY site, a Public Health Evaluation (PHE) was performed to estimate the probability and magnitude of potential adverse human health risks and environmental impacts from exposure to those

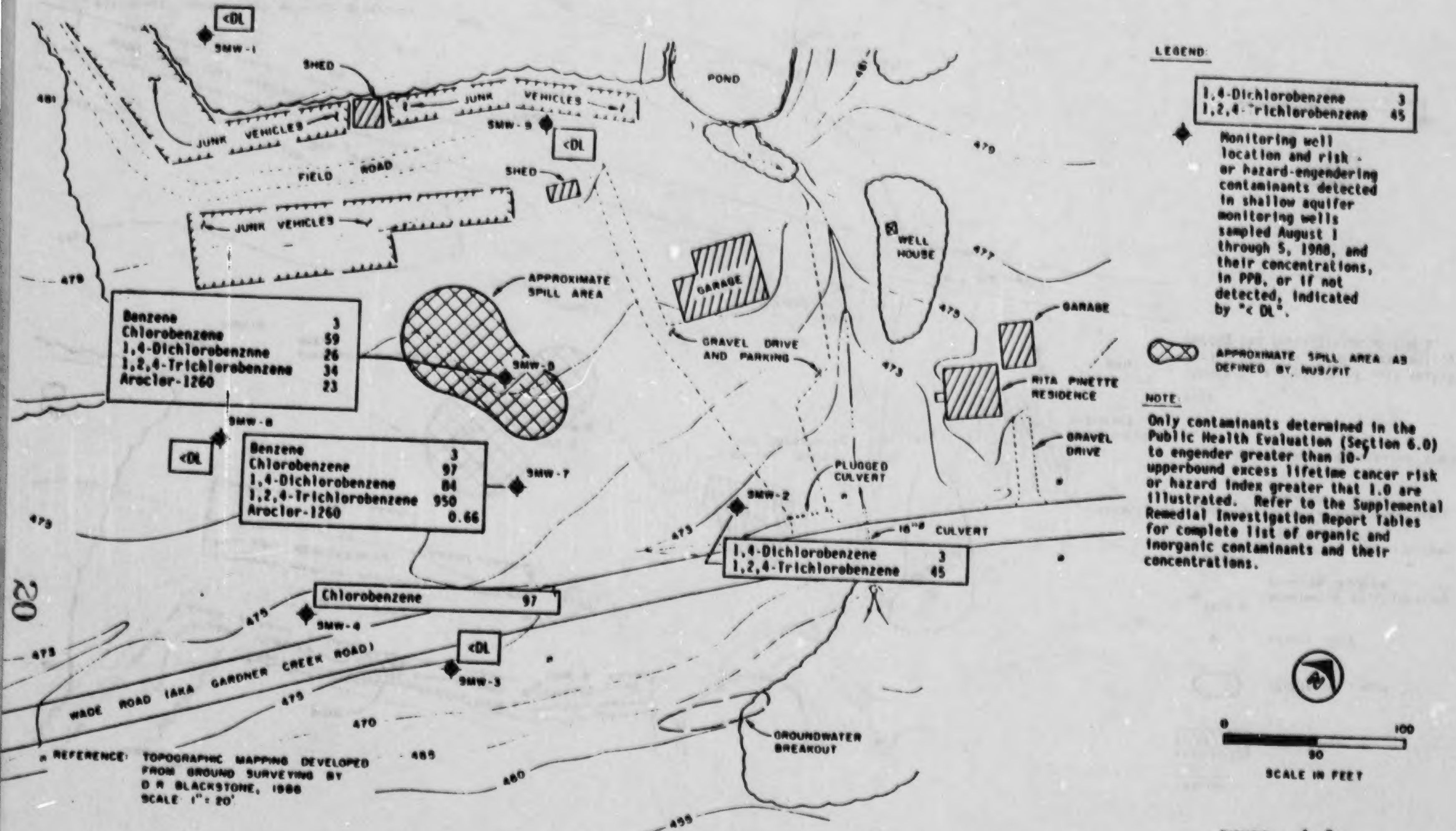

LEGEND
STRUCTURE
VEGETATION LIMITS
UTILITY POLE
SMW-8 MONITORING WELL LOCATION SHALLOW AQUIFER
DMW-5 MONITORING WELL LOCATION DEEP AQUIFER
BMW-8 BEDROCK MONITORING WELL LOCATION
479 EXISTING TOPOGRAPHIC CONTOUR
0
50
100
DMW-1
SMW-1
SHED
DMW-9
JUNK VEHICLES
SMW-9
POND
481
JUNK VEHICLES
FIELD ROAD
SHED
JUNK VEHICLES
479
WELL HOUSE
477
GARAGE
GARAGE
473
473
RITA PINETTE RESIDENCE
GRAVEL DRIVE AND PARKING
GRAVEL DRIVE
DMW-9
SMW-8
DMW-5
APPROXIMATE SPILL AREA
477
DMW-8
SMW-8
SMW-7
DMW-7
PLUGGED CULVERT
SMW-2
DMW-2
473
18" CULVERT
475
DMW-4
SMW-4
473
473
DMW-3
SMW-3
WADE ROAD (AKA GARDNER CREEK ROAD)
475
470
465
460
460
DMW-6
GROUNDWATER BREAKOUT
SMW-6A

REFERENCE: TOPOGRAPHIC MAPPING DEVELOPED FROM GROUND SURVEYING BY D.R. BLACKSTONE, 1986
SCALE: 1" = 20'

NOTE:

SMW-6A is a replacement well installed during Phase II. SMW-6 was destroyed during the installation of DMW-6.

FIGURE 1-7
SUPPLEMENTAL REMEDIAL INVESTIGATION
MONITORING WELL LOCATIONS
PINETTE'S SALVAGE YARD SITE
REMEDIAL INVESTIGATION REPORT


SMW-1
<DL
481
SHED
JUNK VEHICLES
JUNK VEHICLES
POND
SMW-9
<DL
FIELD ROAD
SHED
JUNK VEHICLES
479
479
WELL HOUSE
477
APPROXIMATE SPILL AREA
GARAGE
GRAVEL DRIVE AND PARKING
475
GARAGE
475
RITA PINETTE RESIDENCE
GRAVEL DRIVE
Benzene 3
Chlorobenzene 59
1,4-Dichlorobenznne 26
1,2,4-Trichlorobenzene 34
Aroclor-1260 23
SMW-8
SMW-8
<DL
Benzene 3
Chlorobenzene 97
1,4-Dichlorobenzene 84
1,2,4-Trichlorobenzene 950
Aroclor-1260 0.66
SMW-7
SMW-2
PLUGGED CULVERT
18"Ø CULVERT
473
1,4-Dichlorobenzene 3
1,2,4-Trichlorobenzene 45
Chlorobenzene 97
SMW-4
475
473
<DL
SMW-3
WADE ROAD (AKA GARDNER CREEK ROAD)
475
470
GROUNDWATER BREAKOUT
485
460
455
* REFERENCE: TOPOGRAPHIC MAPPING DEVELOPED FROM GROUND SURVEYING BY D R BLACKSTONE, 1986 SCALE 1" = 20'
0
50
100
SCALE IN FEET

LEGEND:

1,4-Dichlorobenzene	3
1,2,4-Trichlorobenzene	45

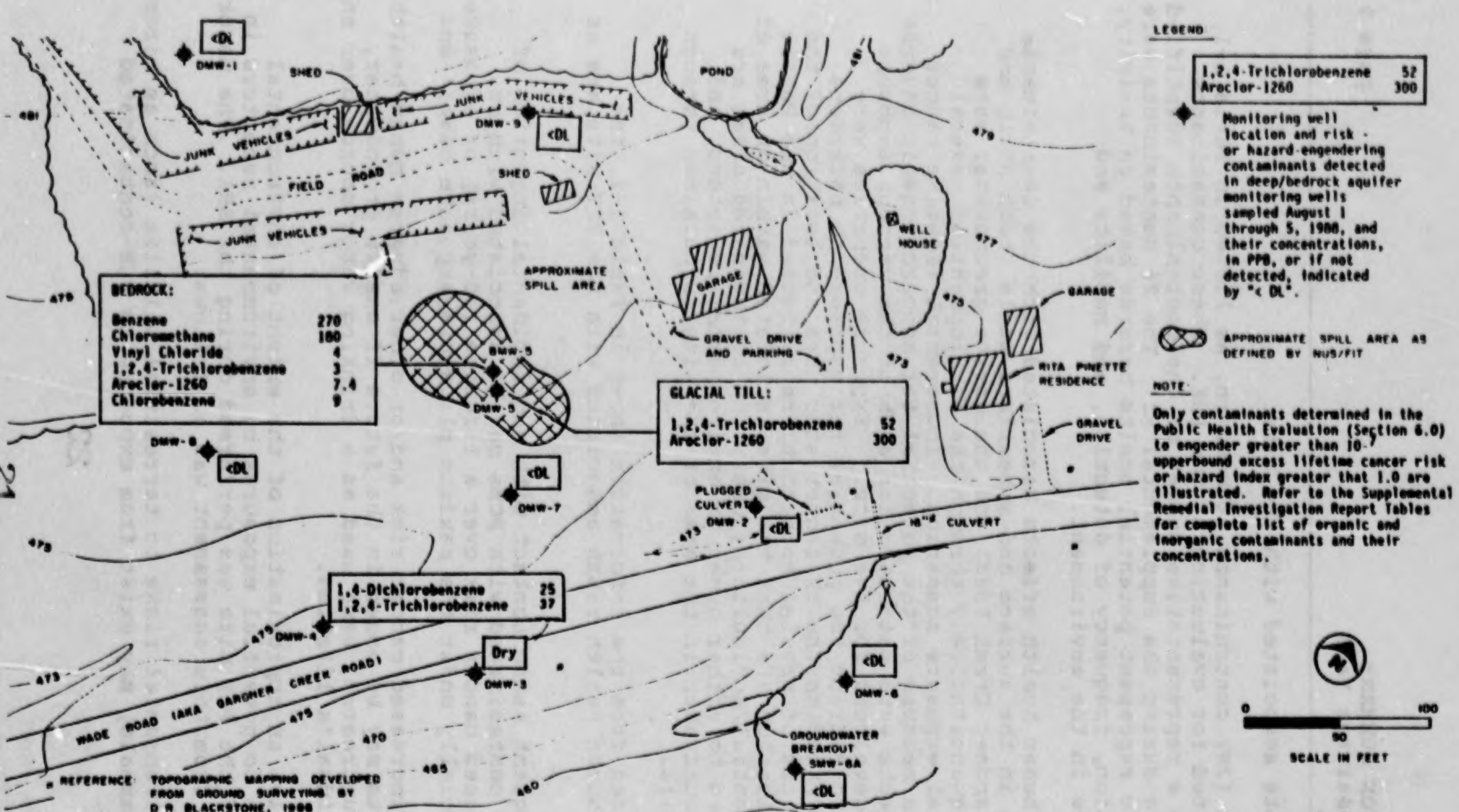
◆ Monitoring well location and risk - or hazard-engendering contaminants detected in shallow aquifer monitoring wells sampled August 1 through 5, 1988, and their concentrations, in PPB, or if not detected, indicated by "< DL".

APPROXIMATE SPILL AREA AS DEFINED BY NUS/FIT

NOTE:

Only contaminants determined in the Public Health Evaluation (Section 6.0) to engender greater than 10^{-7} upperbound excess lifetime cancer risk or hazard index greater that 1.0 are illustrated. Refer to the Supplemental Remedial Investigation Report Tables for complete list of organic and inorganic contaminants and their concentrations.

FIGURE 1-8
ORGANIC CONTAMINATION / SHALLOW AQUIFER
PINETTE'S SALVAGE YARD SITE
FEASIBILITY STUDY REPORT



<DL
DMW-1
SHED
JUNK VEHICLES
DMW-9
<DL
JUNK VEHICLES
FIELD ROAD
SHED
JUNK VEHICLES
POND
479
477
WELL HOUSE
475
GARAGE
RITA PINETTE RESIDENCE
GRAVEL DRIVE
APPROXIMATE SPILL AREA
GARAGE
GRAVEL DRIVE AND PARKING
481
475
BEDROCK:
Benzene 270
Chloromethane 180
Vinyl Chloride 4
1,2,4-Trichlorobenzene 3
Aroclor-1260 7.4
Chlorobenzene 9
DMW-5
DMW-5
GLACIAL TILL:
1,2,4-Trichlorobenzene 52
Aroclor-1260 300
DMW-8
<DL
<DL
DMW-7
PLUGGED CULVERT
DMW-2
<DL
473
16" CULVERT
1,4-Dichlorobenzene 25
1,2,4-Trichlorobenzene 37
DMW-4
473
Dry
DMW-3
<DL
DMW-6
WADE ROAD (AKA GARDNER CREEK ROAD)
475
470
465
460
455
GROUNDWATER BREAKOUT
SMW-6A
<DL
* REFERENCE: TOPOGRAPHIC MAPPING DEVELOPED FROM GROUND SURVEYING BY D R BLACKSTONE, 1988
SCALE 1" = 20'
0
50
100
SCALE IN FEET

LEGEND

1,2,4-Trichlorobenzene	52
Aroclor-1260	300

◆ Monitoring well location and risk - or hazard-engendering contaminants detected in deep/bedrock aquifer monitoring wells sampled August 1 through 5, 1988, and their concentrations, in PPB, or if not detected, indicated by "< DL".

▨ APPROXIMATE SPILL AREA AS DEFINED BY NUS/FIT

NOTE:

Only contaminants determined in the Public Health Evaluation (Section 6.0) to engender greater than 10^{-7} upperbound excess lifetime cancer risk or hazard index greater that 1.0 are illustrated. Refer to the Supplemental Remedial Investigation Report Tables for complete list of organic and inorganic contaminants and their concentrations.

FIGURE 1-9
ORGANIC CONTAMINATION / DEEPER AQUIFER
PINETTE'S SALVAGE YARD SITE
FEASIBILITY STUDY REPORT

contaminants associated with the site.

Twenty-six (26) contaminants of concern, as listed in Table 1-1, were selected for evaluation in the PHE. These contaminants constitute a representative subset of the contaminants identified at the site during the Supplemental RI. The 26 contaminants were selected to represent potential onsite hazards based on toxicity, concentration, frequency of detection, and mobility and persistence in the environment.

Potential human health effects associated with the contaminants of concern in the surface and subsurface soils (both north and south of Gardner Creek Road) and the onsite groundwater were estimated quantitatively through the development of several hypothetical exposure scenarios. Incremental lifetime cancer risks and a measure of the potential for noncarcinogenic adverse health effects were estimated for each of the various exposure scenarios developed for the site. Exposure scenarios were developed to reflect the potential for exposure to hazardous substances based on the characteristic uses and location of the site. Factors of special note that are reflected in the Public Health Evaluation are that the site is located within an area of both residential/agricultural uses, the contaminated areas are unrestricted to either human or environmental receptors, and potable groundwater in the area of the site is obtained through private wells.

As summarized from the information shown in Table 1-2, the potential human health risks associated with the PSY site are as follows:

o frequent human contact with and incidental ingestion of soils contaminated with PCBs may be associated with an increased cancer risk over a lifetime (70-years) of exposure (especially under the maximum plausible exposure case); and

o an increased cancer risk and/or other adverse human health effects may be posed in the future if onsite groundwater, left untreated, were used as a drinking water source over an individual's lifetime.

Additionally, an approximation of the extent of environmental impacts due to potential exposures by environmental receptors in the area of the PSY site was performed during the SRI. The major conclusion from this assessment was as follows:

o environmental risks to terrestrial wildlife (such as birds and mammals) may exist from exposure to PCB-contaminated soils.

TABLE 1-1
SUMMARY OF CHEMICALS OF POTENTIAL CONCERN
PINETTE'S SALVAGE YARD SITE
FEASIBILITY STUDY REPORT

Chemical	Soil	Sediment	Ground Water
PCBs:			
Aroclor-1260	X	X	X
Chlorinated Benzenes:			
Chlorobenzene	X		X
1,2-Dichlorobenzene	X		X
1,3-Dichlorobenzene	X		X
1,4-Dichlorobenzene	X		X
1,2,4-Trichlorobenzene	X		X
Mononuclear Aromatic Hydrocarbons:			
Benzene			X
Toluene	X		X
Halogenated Aliphatic Hydrocarbons:			
Chloromethane			X
Methylene chloride	X		
Chloroethane			X
Ketones:			
Acetone	X	X	X
2-Butanone	X		
Polynuclear Aromatic Hydrocarbons:			
Total noncarcinogenic PAHs[a]	X[b]		
Total carcinogenic PAHs[a]	X[c]	X[d]	
Phthalate Esters:			
bis(2-Ethylhexyl)phthalate	X	X	
Di-n-octylphthalate	X		
Di-n-butylphthalate	X	X	
Pesticides:			
4,4'-DDD	X		
4,4'-DDE	X		
4,4'-DDT	X		
Metals:			
Antimony	X		
Arsenic	X	X	
Beryllium	X		
Chromium	X		
Lead		X	X

---

[a] Individual PAHs are listed as carcinogenic or noncarcinogenic according to IARC (1983)

[b] Benzo(g,h,i)perylene, fluoranthene, phenthrene, pyrene.

[c] Benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, indeno(1,2,3-c,d)pyrene.

[d] Chrysene.

TABLE 1-2
SUMMARY OF POTENTIAL HUMAN HEALTH RISKS
PINETTE'S SALVAGE YARD SITE
FEASIBILITY STUDY REPORT

Exposure Pathway	Upperbound Excess Lifetime Cancer Risk[a]		Hazard Index[b]		Chemicals Contributing to	
	Average	Maximum	Average	Maximum	Maximum Cancer Risk ($>10^{-7}$)	Hazard Index (>1.0)
Present Site and Land Use Conditions:						
Contact with Onsite Surface Soil by Workers	$5x10^{-8}$	$1x10^{-4}$	$1x10^{-3}$	$9x10^{-2}$	PCBs ($1.0x10^{-4}$) PAHs ($1.2x10^{-6}$) Arsenic ($4.1x10^{-6}$)	-- -- --
Contact with Surface Soil North of Gardiner Creek Road by Children	$3x10^{-7}$	$6x10^{-5}$	$4x10^{-3}$	$1x10^{-1}$	PCBs ($5.9x10^{-5}$) PAHs ($7.0x10^{-7}$) Arsenic ($2.3x10^{-6}$)	-- -- --
Contact with Surface Soil South of Gardiner Creek Road by Children	$2x10^{-7}$	$1x10^{-5}$	$1x10^{-3}$	$3x10^{-2}$	PCBs ($7.7x10^{-6}$) Arsenic ($2.1x10^{-6}$)	-- --
Inhalation of Volatilized Organics by Onsite Workers	$5x10^{-9}$	$5x10^{-7}$	$1x10^{-5}$	$2x10^{-4}$	PCBs ($4.7x10^{-7}$)	--
Inhalation of Volatilized Organics by Nearby Residents	$4x10^{-6}$	$6x10^{-6}$	$5x10^{-4}$	$8x10^{-4}$	PCBs ($5.3x10^{-6}$) PAHs ($1.8x10^{-7}$)	-- --
Inhalation of Fugitive Dusts by Onsite Workers	$4x10^{-14}$	$2x10^{-12}$	NC	NC	--	--
Inhalation of Fugitive Dusts by Nearby Residents	$2x10^{-13}$	$4x10^{-12}$	NC	NC	--	--

Table 1-2
Page 2

Exposure Pathway	Upperbound Excess Lifetime Cancer Risk[a]		Hazard Index[b]		Chemicals Contributing to	
	Average	Maximum	Average	Maximum	Maximum Cancer Risk ($>10^{-7}$)	Hazard Index (>1.0)
Future Site and Land Use Conditions:						
Contact with Surface Soil by Future Onsite Residents	$3x10^{-6}$	$5x10^{-4}$	$6x10^{-3}$	$1x10^{-1}$	PCBs ($4.4x10^{-4}$) PAHs ($5.7x10^{-6}$) Arsenic ($2.0x10^{-5}$)	-- -- --
Ingestion of Ground Water from the Shallow Aquifer	$2x10^{-4}$	$5x10^{-3}$	$3x10^{-1}$	2	PCBs ($5.1x10^{-3}$) DCB ($5.6x10^{-5}$) --	-- -- TCB (1.4)
Ingestion of Ground Water from the Deep Aquifer	NC	$7x10^{-2}$	$2x10^{-1}$	$4x10^{-1}$	PCBs ($6.6x10^{-2}$) DCB ($1.7x10^{-5}$)	--
Ingestion of Ground Water from the Bedrock Aquifer	NC	$2x10^{-3}$	NC	$1x10^{-1}$	PCBs ($1.4x10^{-3}$) Benzene ($2.3x10^{-4}$) CM ($6.3x10^{-5}$)	-- -- --
Contact with Sediment from the Eastern Onsite Pond by Children	$7x10^{-8}$	$1x10^{-6}$	$2x10^{-3}$	$2x10^{-2}$	PCBs ($5.3x10^{-7}$) Arsenic ($6.8x10^{-7}$)	-- --
Contact with Sediment from the Drainage Swale by Children	$4x10^{-7}$	$1x10^{-5}$	$6x10^{-3}$	$7x10^{-2}$	PCBs ($2.6x10^{-6}$) PAHs ($2.8x10^{-6}$) Arsenic ($7.5x10^{-6}$)	-- -- --
Contact with Sediment from the Breakout Area by Children	$2x10^{-7}$	$6x10^{-6}$	$5x10^{-3}$	$5x10^{-2}$	PCBs ($1.4x10^{-6}$) PAHs ($3.0x10^{-6}$) Arsenic ($1.5x10^{-6}$)	-- -- --

Table 1-2
Page 3

Exposure Pathway	Upperbound Excess Lifetime Cancer Risk[a]		Hazard Index[b]		Chemicals Contributing to Maximum Cancer Risk (>10-7)	Chemicals Contributing to Hazard Index (>1.0)
	Average	Maximum	Average	Maximum		
Contact with Sediment from the Western Onsite Pond by Children	NC	NC	NC	$3x10^{-6}$	--	--

---

[a] The upperbound excess lifetime cancer risk represents the additional probability that an individual may develop cancer over a 70-year lifetime as a result of the exposure conditions evaluated.

[b] The hazard index indicates whether or not exposures to mixtures of noncarcinogenic chemicals may result in adverse health effects. A hazard index less than one indi[illegible] adverse human health effects are unlikely to occur.

DCB - 1,4-dichlorobenzene
TCB - 1,2,4-trichlorobenzene
CM - chloromethane
NC - not calculated

A more complete discussion of the potential human health risks and environmental impacts from the PSY site can be found in Section 6.0, Public Health Evaluation, of the Supplemental Remedial Investigation report (Ebasco, 1989a).

VII. DOCUMENTATION OF NO SIGNIFICANT CHANGES

EPA adopted a Proposed Plan (preferred alternative) for remediation of the PSY site on March 8, 1989. No significant changes have been made to the selected alternative since that time based on public comments.

VIII. DEVELOPMENT AND SCREENING OF ALTERNATIVES

A. Statutory Requirements/Response Objectives

Prior to the passage of the Superfund Amendments and Reauthorization Act of 1986 (SARA), actions taken in response to releases of hazardous substances were conducted in accordance with CERCLA as enacted in 1980 and the revised National Oil and Hazardous Substances Pollution Contingency Plan (NCP), 40 CFR Part 300 (1988), promulgated in the Federal Register on November 20, 1985. Although EPA proposed revisions on December 21, 1988 to the NCP to reflect SARA, until those proposed revisions are finalized, the procedures and standards for responding to releases of hazardous substances, pollutants and contaminants shall be in accordance with Section 121 of CERCLA and to the maximum extent practicable, the current NCP.

Under its legal authorities, EPA's primary responsibility at Superfund sites is to undertake remedial actions that are protective of human health and the environment. In addition, Section 121 of CERCLA establishes several other statutory requirements and preferences, including: a requirement that EPA's remedial action, when complete, must comply with applicable or relevant and appropriate environmental standards established under federal and state environmental laws unless a statutory waiver is invoked; a requirement that EPA select a remedial action that is cost-effective and that utilizes permanent solutions and alternative treatment technologies or resource recovery technologies to the maximum extent practicable; and a statutory preference for remedies that permanently and significantly reduce the toxicity, mobility, or volume of hazardous substances over remedies that do not achieve such results through treatment. Response alternatives were developed to be consistent with these Congressional mandates.

A number of potential exposure pathways were analyzed for risk and threats to public health and the environment in the Public Health Evaluation for the PSY site. Guidelines in the Superfund Public Health Evaluation Manual (EPA, 1986) regarding development of risk analyses for remedial alternatives were used to assist EPA in the development of response actions. As a result of these assessments, remedial response objectives were developed to mitigate existing and future threats to public health and the environment. These response objectives are:

o provide adequate protectiveness to human health against risks associated with direct contact or incidental ingestion of contaminants in the surface and subsurface soils/sediments, and from current and potential future migration of contaminants from soils to groundwater, sediments and surface water;

o provide adequate protectiveness to human health from potential risks associated with inhalation of VOCs and PCBs potentially released from the site;

o provide adequate protectiveness to human health from risks associated with potential future consumption of groundwater;

o provide adequate protectiveness to the environment, including plants and terrestrial and aquatic wildlife, from potential adverse impacts associated with contact with contaminated surface soils/sediments, and from current and future distribution of contaminants migrating in groundwater, sediments, and surface water;

o ensure adequate protection of groundwater, air, and surface water from the continued release of contaminants from soils/sediments; and

o comply with chemical-specific, location-specific, and action-specific ARARs and other guidance for surface and subsurface soils, groundwater, air, and surface water for both existing and future site conditions.

B. Technology and Alternative Development and Screening

CERCLA, the NCP, and EPA guidance documents including, the "Guidance on Feasibility Studies Under CERCLA" dated June 1985, the "Interim Guidance on Superfund Selection of Remedy" [EPA Office of Solid Waste and Emergency Response (OSWER)], Directive No. 9355.0-19 (December 24, 1986), and the Interim Final "Guidance for Conducting RIs and FSs under CERCLA," OSWER Directive No. 9355.3-01, set forth the process by which remedial actions are evaluated and selected. In accordance with these requirements and guidance documents, treatment alternatives were developed for the site ranging from an alternative that, to the degree possible, would eliminate the need for long-term management (including monitoring) at the site to alternatives involving treatment that would reduce the toxicity, mobility, or volume of hazardous substances as their principal element. In addition to the range of treatment alternatives, a containment option involving little or no treatment and a no-action alternative were developed in accordance with Section 121 of CERCLA.

Section 121(b)(1) of CERCLA presents several factors that, at a minimum, EPA is required to consider in its assessment of alternatives. In addition to these factors and the other statutory directives of Section 121 of CERCLA, the evaluation and selection process was guided by the EPA document "Additional Interim Guidance for FY'87 Records of Decision" dated July 24, 1987. This document provides direction on the consideration of SARA cleanup standards and sets forth nine factors that EPA should consider in its evaluation and selection of remedial actions. The nine factors are:

1. Overall Protection of Human Health and the Environment.
2. Compliance with Applicable or Relevant and Appropriate Requirements (ARARs).
3. Long-term Effectiveness and Permanence.
4. Reduction of Toxicity, Mobility or Volume.
5. Short-term Effectiveness.
6. Implementability.
7. Cost.
8. State Acceptance.
9. Community Acceptance.

Chapter 4.0 of the Draft Final Feasibility Study identified, assessed and screened technologies based on their effectiveness and implementability at the PSY site. These technologies were combined into source control (SC) and management of migration (MM) alternatives. Chapter 5.0 in the Draft Final Feasibility Study presented the remedial alternatives developed by combining the technologies identified in the previous screening process into the categories required by OSWER Directive No. 9355.0-19 (as stated above). An initial screening of these remedial alternatives was conducted in Chapter 6.0 of the Draft Final Feasibility Study to narrow the number of potential remedial alternatives for further detailed analysis while preserving a range of options. Each remedial alternative was then evaluated in detail in Chapter 7.0 of the Draft Final Feasibility Study based upon the nine criteria also identified above.

In summary, of the twelve (12) source control and management of migration remedial alternatives screened in Chapter 6.0, ten (10) were retained from this screening process. Table 1-3 identifies these 10 individual remedial alternatives, and the resulting sixteen (16) overall site remediation alternatives that were retained for detailed analysis.

IX. DESCRIPTION/SUMMARY OF THE DETAILED AND COMPARATIVE ANALYSIS OF ALTERNATIVES

This section presents a narrative summary and brief evaluation of each alternative according to the evaluation criteria described above. A detailed comparative assessment of each remedial alternative can be found in Chapter 8.0 of the Draft Final Feasibility Study.

A. Source Control (SC) Alternatives Analyzed

The source control alternatives analyzed for the site include a minimal no-action alternative (SC-1); two containment alternatives which primarily contain the contamination by capping or landfilling (SC-2 and SC-4); and four treatment alternatives which treat the contamination by either chemical or thermal treatment methods (SC-5, SC-7, SC-8, SC-9). It should be noted that the approximate present worth costs stated below are based upon a 5 ppm PCB soil cleanup level and the soil cleanup levels associated with protection of groundwater at the site. Furthermore, these costs are solely for the corresponding technology identified (i.e., no combination technologies/alternatives are provided herein).

SC-1
Minimal No-Action

Approximate Present Worth Cost:
$654,000.

This alternative would involve no remedial action of the contaminated soils at the site. However, this alternative would entail installing a fence and posting warning signs around areas of the contaminated soils, obtaining land use restrictions, and conducting public education programs to inform the public about the potential hazards remaining at the site. Additionally, a

TABLE 1-3
MERGING OF SC AND MM ALTERNATIVES
PINETTE'S SALVAGE YARD SITE
FEASIBILITY STUDY REPORT

		MM ALTERNATIVES		
		MM-1	MM-2	MM-3
SC ALTERNATIVES		Minimal No-Action	Ground Water Collection	Expedited Ground Water Collection
SC-1	Minimal No-Action	SR-1	NC[1]	NC[1]
SC-2	Capping with Slurry Wall	SR-2-1	NC[2]	NC[2]
SC-4	Offsite Landfill	SR-4-1	SR-4-2	SR-4-3
SC-5	Incineration[3]	SR-5-1	SR-5-2	SR-5-3
SC-7	Solvent Extraction	SR-7-1	SR-7-3	SR-7-3
SC-8	Dechlorination	SR-8-1	SR-8-2	SR-8-3
SC-9	In Situ Vitrification	SR-9-1	SR-9-2	NC[4]

SR: Site Remediation Alternative

NC: This combination of SC and MM alternatives is Not Compatible - see footnotes below.

NOTE: SC Alternatives 4, 5, 7, 8 and 9 also include PCB action levels of 1, 2, 10 and 50 ppm for contaminated solids.

[1] Ground water collection and treatment without a complementary SC component would not provide an adequate level of protection.

[2] As capping is a full containment alternative, ground water extraction and treatment is considered not compatible due to the limited amount of horizontal inflow and vertical percolation.

[3] Onsite for 1, 2 and 10 ppm action levels, offsite for 50 ppm action level.

[4] Alternative MM-3 is not compatible with Alternative SC-9 due to the presence of a vitrified mass where the two additional trenches in MM-3 would be located.

long term monitoring program would be instituted through the installation of additional monitoring wells; groundwater, surface water and sediment sampling; and conducting a review of site conditions every five years.

This alternative would not provide overall protection of human health and the environment at the site, and would not comply with ARARs. Additionally, this alternative does not use treatment as a principal element, and consequently, there would be no reduction in the toxicity, mobility, or volume of contaminants present on the site.

SC-2
Capping with Slurry Wall

Approximate Present Worth Cost: $1,140,000.

This alternative would involve placing an impermeable cap over the contaminated soils and constructing a slurry wall extending into the low permeability clay layer underlying the site. The cap would consist of approximately four inches of asphalt with approximately 12 inches of stone underneath the asphalt. Included within the stone layer would be a single layer of synthetic waterproof material. In order to minimize the areal extent of the cap, areas of contamination that are less than approximately two feet thick would be consolidated under the area to be capped.

In addition to the cap, a two-foot thick slurry wall extending to a depth of approximately 8 to 10 feet below the ground surface would be placed around the perimeter of the cap. The slurry wall would be installed to redirect groundwater flow away from the contaminated soils underlying the cap. Additionally, EPA would recommend establishing land use restrictions; fence and post warning signs at the site; conduct public education programs; install additional groundwater monitoring wells; monitor groundwater, surface water and sediment over the long term; and conduct a review of site conditions every five years.

The goal of this alternative is to reduce the potential risks associated with direct contact and/or incidental ingestion of the contaminated soils, and to reduce the mobility of these contaminants by isolating and minimizing the amount of precipitation that could infiltrate into the contaminated soils. However, since no treatment of the contaminated soils would be employed under this alternative, no reduction in the toxicity or volume of contaminants would be achieved. This alternative would comply with ARARs, but the cap design would not be consistent with the current RCRA cap design guidance, although it does provide a similar degree of protectiveness at less cost. Finally, although this alternative uses readily available technologies and services and is easy to implement, capping is not a permanent remedy; this would require long term monitoring and maintenance, and the potential exists for additional replacement costs should the cap leak or fail.

SC-4
Off-site Landfill **Approximate Present Worth Cost: $2,200,000.**

This alternative would involve excavating and dewatering the contaminated soils, and then disposing of the soils at RCRA- and/or TSCA-approved off-site hazardous waste landfill(s). During the excavation activities, temporary fences would be constructed to reduce access to these excavated areas. The excavated areas would be filled with clean soil, regraded, and revegetated to return these areas to their original condition. EPA would also conduct public education programs; install additional groundwater monitoring wells; and monitor groundwater, surface water and sediment for several months following completion of this alternative.

The goal of this alternative is similar to that of SC-2, except that the contaminated soils would be removed from the site and placed in an off-site landfill. This alternative would meet ARARs and, since excavation of contaminated soils is a key component of this alternative, the potential for continued migration of contaminants to the groundwater at the site would be significantly reduced. However, this alternative may pose potential short-term risks to the public health and the environment during excavation and transportation to the landfill location(s), and potential long-term risks at the landfill(s) themselves. In addition, no reduction in the toxicity, mobility or volume of wastes would be realized through this alternative since no treatment is employed. Furthermore, off-site disposal without prior treatment to the maximum extent practicable is not a remedial alternative favored by CERCLA.

SC-5
Incineration **Approximate Present Worth Cost: $3,540,000.**

This alternative would involve the excavation of contaminated soils, and the thermal treatment of these soils either on-site or off-site. [Note: see Section X, THE SELECTED REMEDY, for a discussion of the off-site incineration alternative; costs shown above are solely for on-site incineration]. Thermal treatment of contaminated soils would involve extremely high temperatures which would destroy approximately 99.9999% of the contaminated organic chemicals in the soil. Following excavation at the site, the backfilling, regrading, revegetation and additional recommended activities discussed above for SC-4 would be implemented.

This alternative would achieve the goals of reducing the principal threats identified at the site by treating and permanently destroying the contaminated soils and thereby significantly reducing the toxicity, mobility and volume of these soils. This alternative would also comply with all ARARs, provide for long-term permanence, and be protective of human health and the environment both in the soils and groundwater. However, this alternative may involve certain short-term risks from the excavation of soils and the ensuing increase in traffic in the area which would require engineering/institutional solutions to prevent the release of contaminants from the site.

SC-7
On-Site Solvent Extraction — **Approximate Present Worth Cost: $1,600,000.**

This alternative is a component of the overall source control remedial alternative selected for the site. Refer to Section X, THE SELECTED REMEDY, for a discussion of this alternative.

SC-8
On-Site Dechlorination — **Approximate Present Worth Cost: $2,375,000.**

This alternative would involve excavating the contaminated soils and mixing them in a stainless steel reaction vessel with a combination of chemicals forming a reagent, KPEG (potassium polyethylene glycol), which is capable of detoxifying PCBs through the removal of chlorine atoms from the PCB molecule. The mixture is then heated to increase the rate of reaction of the PCBs, and to drive off the volatile organics (VOCs) from the soil. The VOC vapors generated are then captured with carbon filters before release to the atmosphere. Decontaminated soils resulting from this process would then be placed back on-site within the original excavated areas, and the contaminated reagent disposed of off-site at a licensed incineration facility.

The goal of this alternative would be to provide protection of public health and the environment by detoxifying the principal threat at the site posed by direct contact/incidental ingestion of PCB-contaminated soils, while complying with ARARs. In addition, dechlorination would provide for a significant reduction in the toxicity, mobility and volume of contaminants and would incorporate an alternative treatment technology, as preferred by CERCLA. However, implementation of the dechlorination process would require the construction of a mobile treatment unit for which no full-scale, demonstrated unit currently exists. Finally, the reliability and long-term effectiveness of this innovative treatment technology includes, at present, some degree of uncertainty since only small-scale laboratory and pilot-scale tests have been performed with significant variability being shown in the residual levels of the

KPEG-reagent and/or biphenyl compounds remaining in the treated soil. Furthermore, short-term risks from excavation of soils would be similar to those discussed for alternatives SC-4 and SC-5.

SC-9 **Approximate Present Worth Cost:**
In-Situ Vitrification $2,780,000.

This alternative would involve excavating and consolidating a small quantity of contaminated soils on-site, and then placing electrodes into the soils to be treated (vitrified). A high power electrical current would be passed from the electrodes to the soil, resulting in the melting and transformation of the soil into a glass-like material. This process would destroy and/or volatilize the organic contaminants in the soil, and would bind/fuse any inorganics present into the solid matrix. Any VOCs emitted from the process would be captured at the ground surface through the placement of a stainless steel hood over the area being treated. These vapors would then be passed through a treatment system which would involve air pollution control equipment such as scrubbers and filters. Following treatment, EPA would also conduct activities very similar to those described under SC-2 above regarding land use restrictions, etc.

If successfully employed, this alternative would meet all ARARs and would be protective of human health and the environment since the organic contaminants in the soil would be destroyed. Additionally, the toxicity and mobility of these organics would be significantly reduced while, at the same time, the final volume of material treated would be reduced by approximately 30 to 40 percent; therefore, the area undergoing vitrification would require backfilling and regrading with clean soil. This alternative, however, while utilizing an alternative treatment technology as preferred by CERCLA, has only been demonstrated in the treatment of PCB-contaminated materials on one occasion during a small-scale laboratory test. Therefore, the implementability and long-term effectiveness of this technology at full-scale includes some degree of uncertainty which would require extensive additional laboratory and on-site testing. Finally, it is possible that due to the limited number of full-scale, commercially-available units currently operational at this time, their availability may pose a problem during implementation of this alternative.

B. Management of Migration (MM) Alternatives Analyzed

Management of migration alternatives address contaminants that have migrated from the original source of contamination. At the Pinette's Salvage Yard (PSY) site, organic contaminants have predominantly migrated from the original transformer spill area into the on-site groundwater. However, this contamination does not impact the groundwater past the site boundary. The management of migration alternatives evaluated for the PSY site include a minimal no-action with monitoring alternative (MM-1); and two active groundwater collection and treatment alternatives (MM-2 and MM-3).

Based on the distribution of the organic contaminants identified at the PSY site, it is apparent that the benzene and chlorinated benzene compounds are slowly migrating with the groundwater towards the south-southeast from the site. However, the distribution of PCBs detected in the groundwater is limited to the approximate spill area. This is principally due to the relative immobility of PCBs in groundwater, since PCBs tend to adhere tightly to soil particles.

MM-1 **Approximate Present Worth Cost:**
Minimal No-Action **$604,000.**

This alternative would consist of land use (deed) restrictions and the recommended imposition of institutional controls to completely restrict the use of groundwater at the site. Additionally, public education programs would be established to inform the public about the hazards present at the site, and a long-term monitoring program would be instituted to evaluate changes in contaminant concentrations in groundwater, surface water and sediments. The site would also be re-evaluated every five years to monitor and assess the need to implement additional remedial actions at the site.

This alternative would be easily implementable but would not provide overall protection of human health and the environment or attain ARARs (or provide grounds for invoking a waiver) at the site. However, over the long-term (likely greater than 10 years), some of the principal threats posed by the contaminated groundwater, excluding that associated with PCBs, would likely dissipate as natural attenuation dilutes and disperses the more volatile contaminants found in the on-site groundwater. Additionally, this alternative would not reduce the toxicity, mobility or volume of contaminants since no treatment is involved.

MM-2 **Approximate Present Worth Cost:**
Groundwater Collection and Treatment **$1,137,000.**

This alternative would consist of the installation of collection trench(es) located in the shallow aquifer, if necessary, and extraction well(s) located in the deep aquifer on the site. The collected groundwater would then be pumped through a treatment system located on-site consisting of a granular filter to remove suspended/colloidal particulate matter, and a carbon adsorption unit (using activated carbon) to treat/remove the organic contaminants found in the on-site groundwater. All treated groundwater would be discharged back into the shallow aquifer through the use of shallow recharge trenches. The entire system should extract approximately three to six gallons per minute for approximately five years.

This alternative would consist of components similar to MM-1, such as deed restrictions as described above. However, this alternative would involve treating the contaminated groundwater to the maximum extent practicable, and should result in achieving the response objectives within a shorter time period. Additionally, a significant reduction in the toxicity, mobility and volume of several of the organic contaminants in the groundwater is anticipated using easily implementable materials and services involved with this alternative. However, a waiver from compliance with one State ARAR, the Maine Maximum Exposure Guideline (MEG) for PCBs, would likely need to be invoked due to the technical impracticability from an engineering perspective of collecting the particulate-bound PCBs from the groundwater to a level that meets state drinking water standards. (See Section X (B)(2) of the ROD for a discussion of this issue.)

MM-3
Approximate Present Worth Cost:
Expedited Groundwater Collection and Treatment **$947,000.**

This alternative is a component of the overall remedial alternative selected for the site. Refer to Section X, THE SELECTED REMEDY, for a discussion of this alternative.

X. THE SELECTED REMEDY

The selected remedial action for the PSY site is a comprehensive approach for overall site remediation which involves combining components of different source control alternatives (SC-5 and SC-7) and a management of migration alternative (MM-3). This comprehensive approach is necessary in order to achieve all the response objectives established for site remediation and to meet legal requirements.

A. Description of the Selected Remedy

The following discussion presents the likely sequence of events for the implementation of the selected remedy:

Fencing: The first part of the selected remedy will involve temporarily restricting access to the site during all site remediation activities. This will require the installation of a

6-foot high chainlink fence topped with barbed wire around the perimeter of the contaminated areas of the site, and where support equipment/facilities are to be located in order to perform the selected remedy. The fence will be equipped with appropriately sized gates for controlled access, and warning signs posted at 100-foot intervals along the fence.

Soil Excavation and Treatment: This source control component comprises the majority of the selected remedy. This component consists of excavating approximately 2,000 to 2,200 cubic yards of PCB/other organic chemically-contaminated soils and treating these soils either off-site through incineration or on-site using solvent extraction.

Prior to the excavation of these contaminated soils, precautions will be used to ensure proper drainage of storm water away from the site. Erosion control in the form of silt fences will be installed to prevent uncontrolled movement of contaminated, excavated soils. Following the installation of these sediment/erosion control structures, clearing and grubbing will be performed on the vegetated portions of the site (especially south of Gardner Creek Road).

Excavation will then proceed initially on those soils presently known to be contaminated with PCBs at concentrations greater than 50 parts per million (ppm). These soils (approximately 300 cubic yards) will then be dewatered using draining beds installed on the site. Following this dewatering step, these soils will be processed (as needed) to reduce the maximum particle size required by the remedial incineration contractor (typically 1 to 1-1/2 inches). These soils will then be loaded into either 30 gallon fiberboard drums or larger rolloff containers. Selected samples will be taken of these soils to ensure that all appropriate regulatory requirements are met prior to decontaminating the trucks that will be used to transport these soils to the off-site, TSCA-permitted incineration facility.

Excavation will then resume in order to remove those soils currently known to be containing between 5 and 50 ppm PCBs (approximately 1,300-1,400 cubic yards), and those soils contaminated with other organic chemicals (benzene, chlorobenzene, etc.) in excess of the groundwater protection cleanup levels (approximately 400-500 cubic yards). These soils will be treated on the PSY site using a solvent extraction technology which involves the use of a solvent to extract the PCBs and other organic chemicals from the soil. An on-site mobile laboratory will be utilized during this entire process to determine the contaminant concentrations in both the soil fed to the solvent extraction unit and the solid residue leaving the system to ensure that all cleanup criteria are being met. The liquid PCBs and other organic chemicals extracted from the soils by this process will be collected and transported off-site to a TSCA-licensed incineration facility. Residual water from the process will be pumped into storage tanks for treatment by a portable carbon unit located on-site or other acceptable means of treatment. During on-site solvent extraction, exhaust gases from the process will be treated by air pollution control devices to ensure that health and safety and air quality requirements are being met.

Prior to full-scale implementation of the solvent extraction process on the site, a pilot test will be conducted to establish the optimum operational settings for the extraction of those contaminants specific to the PSY site, and to verify that soil residues from the process are nonhazardous. After the pilot studies determine the optimum treatment scheme, full-scale operation will proceed.

Additionally, removal of PCB-contaminated soils containing greater than 1 ppm (but less than 5 ppm) to a minimum depth of 10 inches will occur at the site. This volume of soil (approximately 500 cubic yards) will be moved to the areas resulting from the excavation of the original 2,000-2,200 cubic yards undergoing treatment as described above. These soils will be consolidated into the on-site excavation prior to the likely replacement of those nonhazardous soil residues resulting from the on-site solvent extraction process. All site areas, including those undergoing this additional consolidation activity, will be covered with new native soil containing less 1 ppm PCBs, regraded, and revegetated in order to return each area to its original condition.

Management of Migration: The management of migration portion of the selected remedy involves the utilization of groundwater collection and treatment following contaminated soil excavation, as described above. This groundwater system will entail the construction of one or more shallow interceptor trenches and one or more deep extraction wells to collect the contaminated on-site groundwater. Collected groundwater will then be pumped through a granular filter to remove suspended/colloidal particulate matter in the groundwater.

Following this preliminary filtration step, the groundwater will be treated by carbon adsorption, which uses activated carbon to remove the organic contaminants found in the groundwater. All treated groundwater will then be discharged back into the shallow aquifer through the use of recharge trenches. The entire aquifer collection system will collect approximately eight to sixteen gallons per minute for approximately two years. Note that this time estimate is preliminary at present, but will be evaluated in considerable detail during the design of the entire groundwater collection and treatment system.

Institutional Controls/Environmental Monitoring: In addition to temporarily restricting access to the site during site remediation, the selected remedy includes (at a minimum); (1) the removal from the site of any junk vehicles/debris hindering site activities, (2) establishing institutional controls, and providing long-term monitoring of the salvage yard to detect potential future contaminant releases to the environment, (3) implementing public education programs (public meetings and presentations) to increase public awareness about the hazards at the site, (4) installing additional monitoring wells and monitoring groundwater, surface water and sediments. To the extent required by law, EPA will review the site at least once every five years after the initiation of remedial action at the site if any hazardous substances, pollutants or contaminants remain at the site to assure that the remedial action continues to protect human health and the environment. EPA will also evaluate risk posed by the site at the completion of the remedial action (i.e., before the site is proposed for deletion from the NPL). Finally, if particulate-bound PCBs are determined not to be completely collected to meet the State ARAR (MEG) for drinking water (see Section X (B)(2) of the ROD), an institutional control would be recommended for the complete prohibition on the use of the on-site groundwater for drinking water purposes.

B. Rationale for Selection/Cleanup Goals

The rationale for choosing the selected alternative is based on the assessment of each criteria listed in the evaluation of alternatives section of this document. In accordance with Section 121 of CERCLA, to be considered as a candidate for selection in the ROD, the alternative must have been found to be protective of human health and the environment and able to attain ARARs unless a waiver can be invoked. In assessing the alternatives that met these statutory requirements, EPA focused on the remaining evaluation criteria, including, short term effectiveness, long term effectiveness, implementability, use of treatment to permanently reduce the toxicity, mobility, or volume, and cost.

EPA also considered nontechnical factors that affect the implementability of a remedy, such as state and community acceptance. Based upon this assessment, taking into account the statutory preferences of CERCLA, EPA selected the remedial approach described in this document for the PSY site.

1. Source Control

The source control portion of the remedial action is designed primarily to address the soil contamination and, to the extent technically practicable, the groundwater contamination at the site by excavating and treating the source areas of contamination. This source control remedy will, in turn, prevent potential direct human and environmental contact with contaminated soils at the site and prevent or minimize future migration of contamination from the contaminated soils to the groundwater.

a. Soil Target Cleanup Levels

PCBs are the most significant components of the contaminated soil at the PSY site, and they represent 90 to 95% of the current/future excess lifetime cancer risk to humans. Therefore, EPA has established target cleanup goals for PCBs at this site based upon a future, residential-use exposure scenario for humans involving direct contact and incidental ingestion of contaminated soils. The assumptions that were used to develop EPA's site-specific PCB cleanup goal for the PSY site are provided in Attachment C to this ROD. The results of these exposure/risk calculations indicate that a lifetime, future use, excess cancer risk level of 1 X 10-5 (one in one hundred-thousand) corresponds to a PCB target cleanup level of 6 ppm.

However, based upon c[illegible] raised by the State of Maine DEP (in consultation with thei[illegible]ment of Human Services-DHS), the ultimate soil target cleanup level for protection of public health at the PSY site was determined to be no greater than 5 ppm anywhere on the site. The state requested this slightly more stringent target cleanup level because the site-specific risk assessment conducted by the DHS, using more conservative exposure assumptions than EPA's, indicated that a greater degree of cleanup was necessary at this site to satisfy State of Maine policy and gain State acceptance.

Excavation of soils to this target cleanup level and treatment by off-site incineration and on-site solvent extraction to this level, as described above, will significantly reduce the risks associated with the site to a level that is protective of public health. Additionally, off-site incineration of those PCB-contaminated soils greater than 50 ppm, and on-site solvent extraction of those PCB-contaminated soils between 5 and 50 ppm, will satisfy all ARARs, provide a permanent remedy favored under Section 121 of CERCLA, and ensure adequate protectiveness into the future through the degree of permanence attained.

Furthermore, in order to provide adequate protectiveness to the environment, including plants and terrestrial/aquatic wildlife, EPA (in consultation with the U.S. Department of the Interior, Fish & Wildlife Service) determined that no soils containing greater than 1 ppm PCBs should remain in surface soils where contamination would be readily accessible to terrestrial wildlife. Therefore, PCB-contaminated surface soils containing greater than 1 ppm but less than 5 ppm located anywhere within the top 10-inches of soil on the site will be moved into the excavated areas described above. These soils will be placed into the previous excavation prior to the likely replacement of the solid nonhazardous residue generated from the on-site solvent extraction process. All site areas, including those undergoing this additional consolidation activity, will eventually be covered with new soil containing less than 1 ppm PCBs and revegetated. This approach will ensure that even if those soils contaminated with between 1 and 5 ppm PCBs were ever disturbed by potential future activities at the site, the PCB levels at the surface will likely be less than 1 ppm due to mixing with clean soil. This cleanup goal and approach is also consistent with the TSCA PCB Spill Cleanup Policy (40 CFR 761 Subpart G) for nonrestricted access areas.

Furthermore, soil cleanup levels for the PSY site were developed (and verified for adequacy) based on the leaching potential of contaminants from site soils into groundwater. This involved calculating the concentrations in site soils required to achieve groundwater target cleanup levels. The approach to developing a list of groundwater contaminant levels from which to derive soil cleanup levels was to utilize regulatory criteria for individual contaminants. The EPA has determined that the Federal Maximum Contaminant Levels (MCLs) and/or the State of Maine's Maximum Exposure Guidelines (MEGs) are the ARARs to be used for this site to the extent that they have been established for the individual contaminants at the site.

Based on the results of the leaching model performed for the PSY site, the following cleanup levels for contaminants in soils were determined:

Contaminant	Soil Cleanup Level for Groundwater Protection
Benzene	260 ppb (unsaturated); 0.42 ppb (saturated)
Chlorobenzene	12,000 ppb (unsaturated); 20 ppb (saturated)
1,4-Dichlorobenzene	26,000 ppb (unsaturated); 42 ppb (saturated)
Chloromethane	30 ppb (unsaturated); 0.05 ppb (saturated)
1,2,4-Tri-chlorobenzene	4,836 ppm (unsaturated); 7.8 ppm (saturated)
PCBs	5,394 ppm (unsaturated); 8.7 ppm (saturated)

Additional details regarding the leaching model and these results can be found in Chapter 3.0, Volume 1 of the Draft Final FS and Appendix B, Volume II of the Draft Final FS.

In summary, specifically for those PCBs in soil at the PSY site, the soil target cleanup level was determined to be 5 ppm, maximum value based upon the future potential risks from direct contact and incidental ingestion of soils rather than from the results obtained from the leaching model for the protection of groundwater at the site.

2. Management of Migration

The management of migration portion of the selected remedial action is designed primarily to provide adequate protectiveness to human health from increased cancer risk and/or other adverse human health effects associated with potential future use of on-site groundwater, if left untreated. This is especially important since all residents living in the immediate vicinity of the site use residential well water as a potable drinking water source and no municipal water supply system currently serves these residents. Additionally, the continued presence and/or migration of the other organic contaminants in the on-site groundwater could potentially mobilize the relatively immobile particulate-bound PCBs also present in the groundwater.

a. Groundwater Target Cleanup Levels

The evaluation of groundwater target cleanup levels focused on the current level of groundwater contamination at the site, the current and potential future-use of the groundwater, and the time required to achieve the overall site remediation goals. The Superfund Public Health Evaluation Manual, EPA's Groundwater Protection Strategy, and the State of Maine's Bureau of Water Quality Control Regulations aided in the development of groundwater remediation target levels for the site.

Based on the contaminants found in the groundwater on the site, and as discussed further in Section XI of the ROD, Statutory Determinations, the following contaminants and their respective MCL or State of Maine MEG were identified as appropriate groundwater cleanup goals:

Contaminant	MCL/MEG
Benzene	5 ppb
1,4-Dichlorobenzene	27 ppb
Chlorobenzene	47 ppb
PCBs	0.5 ppb

Additionally, a groundwater target cleanup level for 1,2,4-trichlorobenzene of 680 ppb was established based upon the reference dose for this compound (2 X 10-2) such that possible lifetime exposure to this level would not be expected to result in any adverse human health effects. Finally, groundwater cleanup goals were established for lead (5 ppb), based on the currently proposed MCL for lead, and for chloromethane (10 ppb), based upon the analytical detection limits of this compound in water.

In summary, the groundwater target cleanup levels for the site are considered protective of human health and the environment. However, achievement of these goals, as well as compliance with all Federal and State ARARs, is considered unlikely at present for the particulate-bound PCBs present in the groundwater. Because the PCBs in the groundwater at the PSY site have been found to be adsorbed onto soil particles, they are likely to be difficult to collect for groundwater treatment. While EPA will collect and treat as much of the PCBs as is technically feasible, it may be impossible to collect enough particulate-bound PCBs in order to reach the target cleanup goal. Therefore, in accordance with Section 117(a)(2) of CERCLA, EPA is invoking a waiver from compliance with the State of Maine Maximum Exposure Guideline for PCBs of 0.5 ppb based on the technical impracticability from an engineering perspective of attaining this level. This however, does not render the selected alternative of expedited collection and treatment of the groundwater ineffective, since several other organics currently exceed ARARs and these organics are considered more carcinogenic to humans than PCBs. In addition, treatment of the other organics will aid in preventing and/or minimizing the migration potential of the PCBs presently in the groundwater. Furthermore, in evaluating the balancing criteria for the selection of a remedy for this site, EPA considers the expedited groundwater collection and treatment alternative the most cost-effective, while at the same time requiring the least amount of time to attain the cleanup goals for those other organics in the groundwater (except PCBs).

XI. STATUTORY DETERMINATIONS

The remedial action selected for implementation at the Pinette's Salvage Yard (PSY) site is consistent with CERCLA and, to the extent practicable, the NCP. The selected remedy is protective of human health and the environment and attains ARARs to the extent technically practicable. The selected remedy also offers the best combination of effectiveness, implementability, and cost in comparison with the other alternatives that provide the same level of protection. The selected remedy is consistent with Section 121 of CERCLA and satisfies the statutory preference for a permanent solution and for treatment which reduces the toxicity, mobility, or volume as a principle element. Additionally, the selected remedy utilizes alternative treatment technologies to the maximum extent practicable.

A. The Selected Remedy is Protective of Human Health and the Environment

The selected remedy for the PSY site will permanently reduce the risks presently posed to human health and the environment by the contaminated soils and, to the maximum extent practicable, by groundwater.

The soil cleanup levels to be attained through excavation and treatment will reduce the risks associated with the soils to a level protective of human health and the environment. The target cleanup levels address the risks from direct contact and incidental ingestion of contaminated soils. In addition, treatment of the soils will also protect groundwater from additional contamination by removing the sources of the contamination. The Draft Final Feasibility Study identified six compounds in the soils requiring remediation: PCBs, benzene, 1,4-dichlorobenzene, 1,2,4-trichlorobenzene, chloromethane, and chlorobenzene. The selected remedy (incineration of soils containing greater than 50 ppm PCBs and solvent extraction of the remaining soils contaminated above target levels) will reduce the risks associated with all six compounds to a level protective of human health and the environment. This level is within the 10-4 to 10-7 cancer risk range that EPA has determined to be protective of human health.

The groundwater target cleanup levels established for the site are the Federal MCLs and/or Maine MEGs for benzene, 1,4-dichlorobenzene, chlorobenzene, and lead, the Maine MEG for PCBs, and risk-based or analytical detection limits for 1,2,4-trichlorobenzene and chloromethane, respectively. EPA has determined that the attainment of MCLs in groundwater at the site is protective of human health and the environment. The MEG for PCBs is not technologically attainable, but EPA is recommending the use of institutional controls at the site to prevent consumption of or other contact with the PCB-contaminated groundwater. With these institutional controls in place, the PCBs remaining in the groundwater at the site will not pose a threat to the public health or environment. Nonetheless, five-year reviews will be conducted at the site to ensure attainment of the protective exposure levels.

The groundwater treatment method selected (expedited collection and treatment) will reduce the concentrations of all contaminants, with the possible exception of PCBs, to the target cleanup levels. Removal of these organic contaminants in the groundwater (excluding PCBs) will also reduce the potential for mobilizing the current particulate-bound PCBs, thereby ensuring that the PCBs will remain in on-site groundwater and that they will not migrate to nearby surface waters or current and potential sources of drinking water.

B. The Selected Remedy Attains ARARs

This remedy will meet or attain all applicable or relevant and appropriate Federal and state requirements that apply to the site, with the possible exception of the state limitation on PCB levels in drinking water (the Maine MEG). Since no technology exists which can ensure collection of the particulate-bound PCBs in order to meet the Maine MEG, EPA is invoking a waiver of this ARAR on the ground that its attainment is technically impracticable from an engineering standpoint. However, the groundwater at the site will be treated for all organic contaminants of concern, including PCBs to the degree that is technically practicable.

Federal environmental laws which are applicable or relevant and appropriate to the selected remedial action at the site are:

Resource Conservation and Recovery Act (RCRA)
Toxic Substances Control Act (TSCA)
Clean Water Act (CWA)
Safe Drinking Water Act (SDWA)
Clean Air Act (CAA)
Occupational Safety and Health Act (OSHA)

Table 2-1 lists potential chemical-specific Federal and State ARARs and gives a brief synopsis of the requirements. This table also includes those chemical-specific advisories, guidances, policies, etc. which, while not ARARs, are to be considered (TBC) in setting target cleanup levels at the site.

Table 2-2 lists potential location-specific ARARs and TBCs for the site, along with a synopsis of these requirements. Finally, Table 2-3 lists action-specific ARARs and TBCs for the remedy selected for the site, as well as those other remedial alternatives considered.

A brief narrative summary of the ARARs follows.

1. Action-specific ARARs

The source control portion of the remedial action will involve the excavation of 2,000 to 2,200 cubic yards of soil from the

TABLE 2-1
POTENTIAL CHEMICAL-SPECIFIC ARARS AND CRITERIA, ADVISORIES, AND GUIDANCE
PINETTE'S SALVAGE YARD SITE
FEASIBILITY STUDY REPORT

Media	Requirement	Status	Requirement Synopsis	Consideration in the RI/FS
GROUND WATER/SURFACE WATER				
Federal Regulatory Requirements	SDWA-MCLs (40 CFR 141.11-141.16)	Relevant and Appropriate	MCLs have been promulgated for a number of common organic and inorganic contaminants. These levels regulate the concentration of contaminants in public drinking water supplies, but may also be considered relevant and appropriate for ground water aquifers used for drinking water.	When the risks to human health due to consumption of ground water were assessed, concentrations of contaminants of concern were compared to their MCLs.
	RCRA-Subpart F Ground Water Protection Standards, Maximum Concentration Limits (40 CFR 264.94)	Relevant and Appropriate	These are one of three possible standards (aside from MCLs and background concentrations) available under Subpart F for setting a cleanup level for remediating ground water contamination from a RCRA facility.	These requirements are relevant and appropriate if exposure and transport studies performed for the site indicate a risk level higher than acceptable levels using MCLs or MCLGs. Procedures for developing maximum concentration limits are outlined in RCRA Subpart F, Section 264.94. Actions to be taken will be consistent with Subpart F.
	SDWA-MCLGs (40 CFR 141.50-141.51)	To be Considered	MCLGs are health-based criteria that should be evaluated for drinking water sources as a result of SARA. These goals are available for a number of organic and inorganic contaminants.	MCLGs may be relevant and appropriate when multiple contaminants or multiple exposure pathways warrant more stringent levels. If such conditions were found to exist at the Pinette's Salvage Yard Site, MCLGs could be considered relevant and appropriate requirements.
Federal Criteria	Federal Ambient Water Quality Criteria (AWQC)	To Be Considered	Remedial actions involving contaminated surface water or ground water must consider the uses of the water and the circumstances of the release or threatened release; this determines the relevance and appropriateness.	This requirement will be considered when determining cleanup levels or potential discharge limits. It may be relevant and appropriate when there is an impact to surface waters and there are no more recent health or environmental-based standards.
	EPA Risk Reference Doses (RfDs)	To Be Considered	RfDs are considered to be the levels unlikely to cause significant adverse health effects associated with a threshold mechanism of action in human exposure for a lifetime.	EPA RfDs are used to characterize risks due to noncarcinogens in various media.

Table 2-1
Page 2

Media	Requirement	Status	Requirement Synopsis	Consideration in the RI/FS
	EPA Carcinogen Assessment Group Potency Factors	To Be Considered	Carcinogenic effects present the most up-to-date information on cancer risk potency derived from EPA's cancer assessment group (CAG).	EPA carcinogen potency factors are used to compute the individual incremental cancer risk resulting from exposure to certain compounds.
	USEPA Ground Water Protection Strategy - USEPA Policy Statement, August, 1984.	To Be Considered	Identifies ground water quality to be achieved during remedial actions based on aquifer characteristics and use.	The requirements of this policy will be considered and evaluated when developing remedial alternatives.
State Regulatory Requirements	Maine DEP, Bureau of Oil and Hazardous Materials Control (38 M.R.S.A., Section 1317 et seq., Chapter 800)	Applicable	This rule identifies certain substances as hazardous matter, discharges of which are subject to discharge removal, notification, reporting, and other requirements under 38 M.R.S.A., Section 1317, et. seq. and rules adopted thereunder.	These requirements are consistent with the USEPA regulations promulgated under Section 311 of the Clean Water Act and published in 40 CFR 116. These requirements will be used to identify all compounds found at the site that are considered to pose a present or potential danger to the people of the state or to its natural environment when deposited on land or discharged on or into water of the state or ambient air.
	Maine DEP, Bureau of Land Quality Control (38 M.R.S.A., Chapter 3, Protection and Improvement of Water, Section 420)	Applicable	This regulation strictly prohibits the deposit, discharge or spill, directly or indirectly into the inland ground or surface waters or tidal waters of this state, or on the ice thereof, or on the banks thereof so that the same may flow or be washed into such waters, or in such manner that the drainage therefrom may flow into such waters, any of the following substances: mercury or any compound containing mercury, toxic or hazardous substances, radiological, chemical, or biological warfare agents.	These regulations will be considered in the development of alternatives in respect to the control of runoff from the site and discharges from the site that may result from onsite treatment facilities.

Media	Requirement	Status	Requirement Synopsis	Consideration in the RI/FS
	Maine DEP, Bureau of Water Quality Control (38 M.R.S.A., Article 4A, Water Classification Program)	Applicable	This regulation declares that it is the state's objective to restore and maintain the chemical, physical and biological integrity of the state's waters and to preserve certain pristine state waters. The regulation sets forth: (1) that the discharge of pollutants into the waters of the state be eliminated where appropriate; (2) that no pollutants be discharged into any waters of the state without first being given the degree of treatment necessary to allow those waters to attain their classification; and (3) that water quality be sufficient to provide for the protection and propagation of fish, shellfish and wildlife and provide for recreation in and on the water.	This regulation will be considered during the development of alternatives that will involve the discharge of treated waters to the surface or ground water. Water quality levels for surface waters and ground water will be considered as a minimum level.
	Maine DEP, Bureau of Water Quality Control, Policy No. 10, "The Discharge of Hazardous Substances to Ground Waters of the State"	To Be Considered	The board will deny applications for waste discharge licenses for the discharge to ground waters of substances designated by the board to be hazardous when such substances are present in concentrations exceeding ground water levels which occur naturally in the area. Exemption may be granted if the ground water is treated to reduce concentrations of pollutants discharged to below the level considered safe for drinking water.	This requirement indicates minimum level of ground water treatment that would be required to achieve safe drinking water standards to provide adequate protection for treatment discharges.

Media	Requirement	Status	Requirement Synopsis	Consideration in the RI/FS
	Maine DEP, Department of Human Services, Bureau of Health, 10-144A CMR 231, Rules Relating to Drinking Water, Section 7A.	Relevant and Appropriate	Maine Maximum Contaminant Levels (MCLs) have been promulgated for a number of contaminants in water. When the state levels are more stringent than federal levels, the state levels will be used.	Primary drinking water standards will be used to set ground water cleanup levels.
	Maine DEP, Bureau of Water Quality Control, Regulations, Chapter 567.	Relevant and Appropriate	Rules for the Land Application of Sludge and Residuals apply to application of municipal or industrial sludges or residuals (establish maximum concentration limits for some metals and PCBs).	These rules are not applicable as no municipal or industrial sludge will be applied as part of a remedy. However, the limits should be considered as potential soil cleanup levels for heavy metals and PCBs.
	Maine DEP, Department of Human Services, Bureau of Health, 10-144A CMR 233, Rules Relating to Testing of Private Water Systems for Potentially Hazardous Contaminants, Appendix C.	Relevant and Appropriate	Maximum exposure guidelines (MEGs) and action levels exist for numerous inorganic and organic compounds in water. When the levels are more stringent than the federal levels, the state levels will be used.	When ground water cleanup levels are determined for the Pinette's site, the more stringent regulatory standards will be used.
AIR				
Federal Regulatory Requirements	CAA - National Ambient Air Quality Standards (NAAQS) - 40 CFR 50.	Relevant and Appropriate	These standards were primarily developed to regulate stack and automobile emissions.	Standards for particulate matter will be used when assessing excavation and emission controls for soil treatment. Standards are considered potentially relevant and appropriate as they provide national rather than site-specific limits.
State Regulatory Requirements	Maine DEP, Bureau of Air Quality Control, Ambient Air Quality Standards (38 M.R.S.A., Section 584, Chapter 110)	Applicable	This regulation establishes ambient air quality standards that are maximum levels of a particular pollutant permitted in the ambient air.	During remedial activities, the 24-hour maximum particulate concentration must be maintained below 150 ug/m^3 and annual geometric mean of the 24-hour concentration should not exceed 60 ug/m^3. The use of dust suppressants may be necessary to maintain those levels.

TABLE 2-2
POTENTIAL LOCATION-SPECIFIC ARARS AND CRITERIA, ADVISORIES AND GUIDANCE
PINETTE'S SALVAGE YARD SITE
FEASIBILITY STUDY REPORT

Site Feature	Requirement	Status	Requirement Synopsis	Consideration in the RI/FS
WETLANDS				
Federal Regulatory Requirements	CWA-Section 404	Applicable	Under this requirement, no activity that adversely affects a wetlands shall be permitted if a practicable alternative with lesser effects is available.	During the identification, screening and evaluation of alternatives, the effects on wetlands are evaluated.
State Regulatory Requirements	Maine, DEP, Bureau of Land Quality Control (38 M.R.S.A., Section 1301 et. seq., Chapter 401)	Applicable	Specifies the site location criteria of a landfill disposal facility, including other requirements cited in this table. Also outlines specific requirements of landfill with respect to ground water and surface water protection, floodplains, buffer strips, minimum depth to water table or bedrock, surface slope, and distance from airports.	These requirements will be evaluated during the development of alternatives.
	Maine DEP, Bureau of Land Quality Control (38 M.R.S.A., Chapter 3, Section 405-410)	Applicable	Outlines the activity standards in the vicinity of a wetland. This requirement regulates the dredging, filling, draining, altering, and polluting of fresh water wetlands, and defines wetlands based on vegetation and soil type.	These requirements will be considered applicable in conjunction with alternatives that propose to alter wetlands at the site.
	Maine DEP, Bureau of Oil and Hazardous Materials Control (30 (M.R.S.A., Section 1301 et. seq., Chapters 850, 851, 853-857)	Relevant and Appropriate	These regulations correspond to RCRA hazardous waste requirements and outline the criteria for the construction, operation, licensing, and maintenance of a new facility or increase in an existing facility for the generation, transportation, storage, treatment, or disposal of hazardous waste. Specifically, no portion of the site may be located within a wetland.	These rules will be addressed if the construction of an onsite treatment or storage facility is proposed that would handle hazardous waste.

Site Feature	Requirement	Status	Requirement Synopsis	Consideration in the RI/FS
WATER BODIES				
State Regulatory Requirements	Maine DEP, Bureau of Land Quality Control (38 M.R.S.A., Chapter 3, Article 2, Section 421)	Applicable	No boundary of any public or private solid waste disposal area shall lie closer than 300 feet to any classified body of surface water. Also known as the Three Hundred Foot Law.	During the development of alternatives, effects on nearby surface waters will be evaluated.
	Maine DEP, Bureau of Land Quality Control (38 M.R.S.A., Chapter 3, Section 425 et.seq.)	Applicable	This requirement specifies that any dredging, filling, or erecting activity on the land adjacent to any river, stream or brook shall not unreasonably interfere with the natural flow or lower the quality of any waters.	Effects on the West Branch of Salmon Brook or Gardiner Creek Branch will be considered if construction or cleanup activities impact these areas.
	Maine DEP, Bureau of Water Quality Control (38 M.R.S.A., Chapter 3, Protection and Improvement of Water, Article 4A, Water Classification Program, Section 464)	Applicable	Classification of Maine Waters - general provisions regulating discharges of pollutants, antidegradation policy. No direct discharge of pollutants to waters with a drainage area <10 square miles.	This regulation will be considered during the development of alternatives that will involve the discharge of treated waters to the surface or ground water.
	Maine DEP, Bureau of Water Quality Control (38 M.R.S.A., Chapter 3, Protection and Improvement of Water, Article 4A, Water Classification Program, Section 465)	Applicable	These regulations set classifications for fresh surface waters, lakes and ponds, estuarine and marine waters, and ground water. The regulations establish guidelines for usages and quality of the waters to be met or maintained.	Cleanup levels for ground water and surface water will be set to permit discharge of or into the surface waters, ground water or wetlands of the state in accordance with these regulations.
	Maine DEP, Bureau of Water Quality Control (38 M.R.S.A., Chapter 3, Protection and Improvement of Water, Article 4A, Water Classification Program, Section 467)	Applicable	This regulation provides a classification of all major river basins and segments thereof within the state boundaries. These major river classification categories correspond with the fresh water classifications of Article 4A, Section 465, which establish guidelines for usages and quality of the waters to be met or maintained.	Discharges made to surface waters of the state should be of a quality that will not degrade the quality of the Aroostook River or tributary thereof.

Site Feature	Requirement	Status	Requirement Synopsis	Consideration in the RI/FS
	Maine DEP, Bureau of Water Quality Control (38 M.R.S.A., Chapter 3, Protection and Improvement of Water, Article 4A, Water Classification Program, Section 468)	Applicable	The West Branch of Salmon Creek and Gardiner Creek are classified as Class B water under the state water quality standards.	Remedial actions should not result in the degradation of water quality classification.
	Maine DEP, Bureau of Water Quality Control (38 M.R.S.A., Chapter 3, Protection and Improvement of Water, Article 4A, Water Classification Program, Section 470)	Applicable	Classification of Ground Water. All ground water shall be classified as not less than GW-A. GW-A shall be of such a quality that it can be used for public water supplies.	Remedial actions should not result in the degradation of ground water classification. Remedial actions should also be considered for aquifer restoration, when appropriate.
OTHER NATURAL RESOURCES				
State Regulatory Requirements	Maine DEP, Bureau of Land Quality Control (38 M.R.S.A., Chapter 3, Section 481-490)	Applicable	The development cannot adversely affect existing uses, scenic character, or natural resources in the municipality or in neighboring municipalities.	The development of remedial alternatives will consider this requirement.
	Maine DEP, Bureau of Land Quality Control (38 M.R.S.A., Chapter 3, Section 371-377)	Applicable	This requirement defines the natural resources to which the site location act applies.	Remedial alternatives will be developed to consider these natural resources.

53

TABLE 2-3
POTENTIAL ACTION-SPECIFIC ARARS
PINETTE'S SALVAGE YARD SITE
FEASIBILITY STUDY REPORT

Action(s)	ARARs	Status	Requirement Synopsis
All	OSHA-General Industry Standards (29 CFR 1910)	Applicable	These regulations specify the 8-hr. time-weighted average concentration for worker exposure to various organic compounds. Training requirements for workers at hazardous waste operations are specified in 29 CFR 1910.120.
All	OSHA-Safety and Health Standards (29 CFR 1926)	Applicable	This regulation specifies the type of safety equipment and procedures to be followed during site remediation.
All	Resource Conservation and Recovery Act (RCRA), RCRA Subtitle C, 40 CFR 260	Relevant and Appropriate	RCRA regulates the generation, transport, treatment and disposal of hazardous waste. Hazardous substances from remedial actions will be disposed of at facilities in compliance with Subtitle C of RCRA. No RCRA - listed hazardous wastes have been identified on-site. Therefore, these regulations are considered relevant and appropriate.
All	OSHA-Record Keeping, Reporting and Related Regulations (29 CFR 1904)	Applicable	This regulation outlines the record keeping and reporting requirements for an employer under OSHA.
All	RCRA - Standards for Owners/Operators of Permitted Hazardous Waste Facilities (40 CFR 264.10-264.18)	Relevant and Appropriate	General facility requirements outline general waste analysis, security measures, inspections, and training requirements.
All	RCRA - Preparedness and Prevention (40 CFR 264.30-264.31)	Relevant and Appropriate	This regulation outlines the requirements for safety equipment and spill control.
All	RCRA - Contingency Plan and Emergency Procedures (40 CFR 264.50-264.56)	Relevant and Appropriate	This regulation outlines the requirements for emergency procedures to be used following explosions, fires, etc.
All	RCRA - Ground Water Protection (40 CFR 264.90-264.109)	Relevant and Appropriate	This regulation details requirements for a ground water monitoring program to be installed at the site.
All	RCRA - Miscellaneous Units (40 CFR 264.600-264.999)	Relevant and Appropriate	These standards are applicable to miscellaneous units not previously defined under existing RCRA regulations for treatment, storage, and disposal units.
All	RCRA - Closure and Post-Closure (40 CFR 264.110-264.120)	Relevant and Appropriate	This regulation details specific requirements for closure and post-closure of hazardous waste facilities. Because of site characteristics, only portions of the closure requirements may be appropriate.

Action(s)	ARARs	Status	Requirement Synopsis
All	Maine DEP Bureau of Oil and Hazardous Materials Control (38 M.R.S.A., Section 1317 *et.seq.*, Chapters 800-802).	Applicable	Regulations apply to identification and control of discharge of hazardous materials.
All	Maine DEP, Bureau of Oil and Hazardous Materials Control (38 M.R.S.A., Section 1301 *et.seq.*, Chapters 850, 851, 853-857)	Applicable	The rules provide a comprehensive program for the handling, storage, and recordkeeping at hazardous waste facilities. They supplement the RCRA regulations.
All	Maine DEP, Bureau of Water Quality Control (38 M.R.S.A., Chapter 3, Article 2, Section 420)	Applicable	No person, firm, corporation, or other legal entity shall place, deposit, discharge, or spill mercury or toxic or hazardous substances, either directly or indirectly, into the inland ground or surface waters, tidal waters, on the ice, or on the banks thereof, so that the same may flow or be washed into such waters, or in such manner that the drainage therefrom may flow into such waters.
All	Maine DEP, Bureau of Water Quality Control (38 M.R.S.A., Chapter 3, Protection and Improvement of Water, Article 4A, Water Classification Program, Section 470)	Applicable	Ground water is classified under the Maine standards to allow the state to manage its surface waters and ground water so as to protect the quality of these waters. Regulations establish water quality standards for direct or indirect discharges to aquifers.
Excavation	CAA - NAAQS for Total Suspended Particulates (40 CFR 50.6)	Relevant and Appropriate	This regulation specifies maximum primary and secondary 24-hr. concentrations for particulate matter. Fugitive dust emissions from site excavation activities must be maintained below 260 ug/m^3 (primary standard). Regulation sets national limitations and is therefore relevant and appropriate.
	RCRA - Land Ban (40 CFR 268)	To be Considered	After November 8, 1988, movement of excavated RCRA-hazardous materials to new locations and placement in or on land will trigger land disposal restrictions (for non-CERCLA actions). CERCLA actions will be regulated under this requirement beginning on November 8, 1990. No RCRA-listed or characteristic hazardous wastes known to exist on-site; therefore, this requirement is only to be considered.
	CWA - Regulations on Disposal Site Determinations Under the Water Act (40 CFR 231)	Relevant and Appropriate	These regulations apply to all existing, proposed, or potential disposal sites for discharges of dredged or fill material into U.S. waters, which include wetlands.
	Maine DEP, Bureau of Air Quality Control, Ambient Air Quality Standards (38 M.R.S.A., Section 584, Chapter 110)	Applicable	This regulation established ambient air quality standards that are maximum levels of a particular pollutant permitted in the ambient air.

Action(s)	ARARs	Status	Requirement Synopsis
Capping-Waste in Place	RCRA - Landfills (40 CFR 264.310(a))	Relevant and Appropriate	Placement of a cap over waste requires a cover designed and constructed to: -Provide long-term minimization of migration of liquids through the capped area; -Function with minimum maintenance; -Promote drainage and minimize erosion or abrasion of the cover; -Accommodate settling and subsidence so that the cover's integrity is maintained; -Have a permeability less than or equal to the permeability of any bottom liner system or natural subsoils present.
	CAA - NAAQS for Particulate Matter Less than 10 Microns in Diameter (40 CFR Part 50, Appendix J)	Relevant and Appropriate	This regulation specifies maximum annual arithmetic mean and maximum 24-hour concentrations for particulate matter less than 10 microns in diameter. Regulation sets national limitations and is therefore relevant and appropriate.
	CAA - NAAQS for Total Suspended Particulates (40 CFR 50.6)	Relevant and Appropriate	This regulation specifies maximum primary and secondary 24-hr. concentrations for particulate matter. Fugitive dust emissions from site excavation activities must be maintained below 260 ug/m^3 (primary standard). Regulation sets national limitations and is therefore relevant and appropriate.
	RCRA - General Standards (40 CFR 264.117(c))	Relevant and Appropriate	Restricts post-closure use of property as necessary to prevent damage to the cover.

56

Action(s)	ARARs	Status	Requirement Synopsis
Clean Closure (Removal)	RCRA - General Standards (40 CFR 264.111)	Relevant and Appropriate	General performance standard requires minimization of need for further maintenance and control; minimization or elimination of post-closure escape of hazardous waste, hazardous constituents, leachate, contaminated runoff, or hazardous waste decomposition products. Also requires disposal or decontamination of equipment, structures, and soils.
	DOT Rules for Transportation of Hazardous Materials (49 CFR Parts 107, 171.1-172.558)	Relevant and Appropriate	This regulation outlines procedures for the packaging, labeling, manifesting, and transporting of hazardous materials.
Closure with Waste In Place (Hybrid Closure)	Proposed Rule 52 FR 8712 (March 19, 1987)	To Be Considered	Requires removal of majority of contaminated materials. Also requires application of cover and post-closure monitoring based on exposure pathway(s) of concern.
Ground Water and Surface Water Monitoring	RCRA - Ground Water Protection (40 CFR 264.97)	For Ground Water: Relevant and Appropriate for Surface Water: To Be Considered	General requirements for ground water monitoring.
Onsite Waste Treatment and Discharge	Maine DEP, Bureau of Water Quality Control, Regulations, Chapter 543	Relevant and Appropriate	This regulation prohibits the injection of hazardous waste into or above water-bearing formations via a new Class IV well. The subsurface discharge into or through a Class IV well that would cause or allow the movement of fluid into an underground source of drinking water that may result in a violation of any Maine Primary Drinking Water Standard, or which may otherwise adversely affect human health, is prohibited.
	Maine DEP, Bureau of Water Quality Control, Regulations, Chapter 582	Applicable	These rules provide safeguards for fresh and salt water fauna in lakes and rivers of the state by establishing in-stream limits on temperature increases resulting from thermal discharges.

Action(s)	ARARs	Status	Requirement Synopsis
	Maine DEP, Bureau of Water Quality Control, Regulations, Chapter 567	Relevant and Appropriate	Rules are applicable to land application of sludges or residuals from municipal or industrial sources but would be relevant and appropriate for activities involving any on-site disposal of treatment studies or residuals.
Construction and Operation of Onsite Landfill	RCRA - Landfills (40 CFR 264, Subpart N)	Relevant and Appropriate	Regulates the design, construction, operation and closure of a hazardous waste landfill.
	RCRA - Land Ban (40 CFR 268)	To Be Considered	After 11/90, placement of CERCLA wastes, which are also RCRA hazardous wastes, on or in land outside unit boundary or area of contamination will trigger land disposal requirements and restrictions. Requires treatment by Best Demonstrated Available Technology (BDAT) before placement. Requirements only to be considered, as no RCRA hazardous wastes are known to be present on-site.
	TSCA - Disposal Requirements (40 CFR 761.60 - 761.79)	Applicable	Establishes treatment and disposal requirements for PCBs in soils for all alternatives which include the disturbance of PCB-contaminated soil containing more then 50 ppm PCBs.
	Maine DEP, Bureau of Land Quality Control (38 M.R.S.A., Chapter 3, Section 421)	Applicable	No boundary of any public or private solid waste disposal area shall lie closer than 300 feet to any classified body of surface water. Also known as the Three Hundred Foot Law.
	Maine DEP, Bureau of Land Quality Control (38 M.R.S.A., Section 1301 et.seq., Chapter 401)	Applicable	Specifies the site location criteria of a landfill disposal facility, including other requirements cited in this table. Also outlines specific requirements of a landfill with respect to ground water and surface water protection, floodplains, buffer strips, minimum depth to water table or bedrock, surface slope, and distance from airports.
Construction and Operation of Onsite Incinerator	RCRA - Incinerators (40 CFR 264, Subpart O)	Relevant and Appropriate	Regulates the design, construction, operation and closure of RCRA hazardous waste incinerators.
	TSCA - (40 CFR 761.70)	Applicable	Lists special performance standards for incineration of PCBs.

Action(s)	ARARs	Status	Requirement Synopsis
	Clean Air Act (CAA) - National Ambient Air Quality Standards (NAAQS) (40 CFR 50)	Relevant and Appropriate	Applies to major stationary sources such as treatment units that have the potential to emit significant amounts of pollutants such as NO_x, SO_2, CO, lead, mercury and particulates (more than 250 tons/year). Regulations under CAA do not specifically regulate emissions from hazardous waste incinerators, but it is likely that Prevention of Significant Deterioration (PSD) provisions would apply to an onsite treatment facility. Regulation sets national limitations and is therefore relevant and appropriate.
	Interim RCRA/CERCLA Guidance on Non-Contiguous Sites and Onsite Management of Waste and Treated Residue (USEPA Policy Statement March 27, 1986)	To Be Considered	If a treatment or storage unit is to be constructed for onsite remedial action, there should be a clear intent to dismantle, remove, or close the unit after the CERCLA action is completed. Should there be plans to accept commercial waste at the facility after the CERCLA waste has been processed, it is EPA policy that a RCRA permit be obtained before the unit is constructed.
	CAA - NAAQS for Particulate Matter Less Than 10 Microns in Diameter (40 CFR Part 50, Appendix J)	Relevant and Appropriate	This regulation specifies maximum annual arithmetic mean and maximum 24-hour concentrations for particulate matter. Regulation sets national limitations and is therefore relevant and appropriate.
	Maine DEP, Bureau of Air Quality Control, Ambient Air Quality Standards (38 M.R.S.A., Section 584, Chapter 110).	Applicable	This regulation establishes ambient air quality standards that are maximum levels of a particular pollutant permitted in the ambient air.
	Maine DEP, Bureau of Air Quality Control, Hexavalent Chromium Particulate Emission Standard (38 M.R.S.A., Section 585, 585A, Chapter 135)	Applicable	Establishes a limitation on the amount of total chromium from any potential source of hexavalent chromium until a technique for measuring hexavalent chromium can be demonstrated.
	Maine DEP, Bureau of Air Quality Control, Incinerator Particulate Emission Standard (38 M.R.S.A., Section 585, 585A, Chapter 104)	Applicable	Establishes a limitation on the amount of particulate matter allowed to be emitted from each of several categories and sizes of incinerators, and a limitation on the capacity of emissions from all incinerators.
Offsite Disposal of Solid Wastes	Standards Applicable to Transporters of Hazardous Waste - RCRA Section 3003, 40 CFR 262 and 263.	Relevant and Appropriate	Establishes the responsibility of offsite transporters of hazardous waste in the handling, transportation, and management of the waste. Requires a manifest, record keeping, and immediate action in the event of a discharge of hazardous waste. On-site wastes are not RCRA hazardous materials and therefore this regulation is relevant and appropriate.

ction(s)	ARARs	Status	Requirement Synopsis
	EPA Interim Policy for Planning and Implementing CERCLA Response Actions. Proposed Rule, 50 FR 45933 (November 5, 1985)	To Be Considered	Discusses the need to consider treatment, recycling, and reuse before offsite land disposal is used. Prohibits use of a RCRA facility for offsite management of Superfund wastes if it has significant RCRA violations.
	DOT Rules for Transportation of Hazardous Materials (49 CFR Parts 107, 171.1-172.558)	Relevant and Appropriate	This regulation outlines procedures for the packaging, labeling, manifesting, and transporting of hazardous materials. For PCB - contaminated soils, regulations would be relevant and appropriate for individual shipments containing less than 10 pounds of PCBs (Reportable Quantity).
	TSCA - Disposal Requirements (40 CFR 761.60 - 761.79)	Applicable	Establishes treatment and disposal requirements for PCBs in soils for all alternatives which include the disturbance of PCB-contaminated soil containing more than 50 ppm PCBs.
Onsite Water Treatment and Discharge	National Pollution Discharge Elimination System (NPDES) (40 CFR 122)	Applicable	Regulates the discharge of water into public surface waters. Among other things, major requirements are: -Use of best available technology (BAT) economically achievable is required to control toxic and nonconventional pollutants. Use of best conventional pollutant control technology (BCT) is required to control conventional pollutants. Technology-based limitations may be determined on a case-by-case basis. -Applicable federally approved state water quality standards must be complied with. These standards may be in addition to or more stringent than other federal standards under the CWA. -The discharge must conform to applicable water quality requirements when the discharge affects a state other than the certifying state. -The discharge must be consistent with the requirements of a water quality management plan approved by EPA. -Discharge limitations must be established for all toxic pollutants that are or may be discharged at levels greater than that which can be achieved by technology-based standards. -Discharge must be monitored to assure compliance. Discharger will monitor: -The mass of each pollutant. -The volume of effluent. -Frequency of discharge and other measurements as appropriate.

e 8 2-3

Action(s)	ARARs	Status	Requirement Synopsis
			-Approved test methods for waste constituents to be monitored must be followed. Detailed requirements for analytical procedures and quality controls are provided. Onsite discharges to surface waters are exempt from procedural NPDES permit requirements. (Section 121 of SARA exempts onsite CERCLA activities from obtaining permits. However, the substantive requirements of the permit must be met.) Offsite discharges would require an NPDES permit. -Monitor and report results (minimum of at least annually). -Comply with additional conditions such as: -Duty to mitigate any adverse effects of any discharge; and -Proper operation and maintenance of treatment systems.
	Proposed Standards for Control of Emissions of Volatile Organics - 52 FR 3748 (February 5, 1987)	To Be Considered	Prescribes proposed standards for VOC emissions from units such as air strippers.
	Toxic Pollutant Effluent Standards (40 CFR 129)	Relevant and Appropriate	Regulates the discharge of the following pollutants: aldrin/dieldrin, DDT, endrin, toxaphene, benzidine, and PCBs.
	Maine DEP, Bureau of Water Quality Control, Regulations, Chapter 543	Relevant and Appropriate	This regulation prohibits the injection of hazardous waste into or above water-bearing formations via a new Class IV well. The subsurface discharge into or through a Class IV well that would cause or allow the movement of fluid into an underground source of drinking water that may result in a violation of any Maine Primary Drinking Water Standard, or which may otherwise adversely affect human health, is prohibited.
	Maine DEP, Bureau of Water Quality Control, Policy No. 10, "The Discharge of Hazardous Substances to Ground Waters of the State"	To Be Considered	The board will deny applications for waste discharge licenses for the discharge to ground waters of substances designated by the board to be hazardous when such substances are present in concentrations exceeding ground water levels which occur naturally in the area. Exemption may be granted if the ground water is treated to reduce the concentrations of pollutants discharged to below the level considered safe for drinking water.
	Maine DEP, Bureau of Land Quality Control (38 M.R.S.A., Chapter 3, Section 371-377)	Applicable	Developments will have a minimal adverse impact on the natural environment. Activities that discharge or may discharge pollutants to ground water may not be located on sand or gravel deposits.

61

Table 2-3
Page 9

Action(s)	ARARs	Status	Requirement Synopsis
	Maine DEP, Bureau of Water Quality Control (38 M.R.S.A., Chapter 3, Article 2, Section 414-A)	Applicable	Regulates the discharge of any pollutants. Specifies that the discharge, either by itself or in combination with other discharges, will not lower the quality of any classified body of water below such classification. The discharge will be subject to effluent limitations that require application of the best practicable treatment.
	Maine DEP, Bureau of Water Quality Control, Regulations, Chapter 582.	Applicable	These rules provide safeguards for fresh and salt water fauna in lakes and rivers of the state by establishing in-stream limits on temperature resulting from thermal discharges.

site, with some of the contaminated soil being transported off-site for incineration and the remainder (majority) being treated on-site through a solvent extraction process. The management of migration portion of the remedy will involve the construction of interceptor trenches and extraction wells to collect groundwater, the installation of a treatment system to remove particulates and organic contaminants, and the construction of trenches on-site for the recharge of treated water back into the ground.

a. Federal

The Resource Conservation and Recovery Act (RCRA) governs the transportation, storage, treatment and disposal of hazardous wastes. Although the PSY site does not have RCRA-hazardous wastes, many RCRA requirements address the same kinds of actions that will be taken at the PSY site and are therefore relevant and appropriate to the implementation of the selected remedy. EPA will comply with the substantive provisions of RCRA regulations governing: Standards for Owners and Operators of Hazardous Waste Treatment, Storage and Disposal Facilities, General Facility Standards (40 CFR 264.10-264.18); Preparedness and Prevention (40 CFR 264.30-264.37); Contingency Plan and Emergency Procedures (40 CFR 264.50-264.56); Releases From Solid Waste Management Units (groundwater protection) (40 CFR 264.90-264.109); Closure and Post-Closure (40 CFR 264.110-264.120, as interpreted by EPA guidance for use at CERCLA sites where RCRA closure is relevant and appropriate but not applicable); and Miscellaneous Units (40 CFR 264.600-264.999). In addition, for those soils being transported off-site for incineration, EPA will comply with relevant and appropriate RCRA regulations for Standards Applicable to Generators and Transporters of Hazardous Wastes (40 CFR 262 and 263) and Department of Transportation Rules for Transportation of Hazardous Materials (49 CFR Parts 107, 171.1-172.558).

Under the Toxic Substances Control Act (TSCA), soils contaminated with PCBs at concentrations greater than 50 ppm that are disposed of after February 17, 1978 must be disposed of in accordance with 40 CFR 761 Subpart D. Since the PSY site contains PCBs at concentrations over 50 ppm, and since disposal will occur after 1978 as part of the remedial action, TSCA regulations are applicable to the selected source control action once excavation takes place. These regulations require treatment by incineration or its destruction equivalent, or chemical waste landfilling. EPA's selected remedy will meet this requirement through the incineration of soils contaminated above 50 ppm at an off-site TSCA-permitted facility.

The TSCA PCB Spill Cleanup Policy (40 CFR 761 Subpart G) is not a binding regulation but a statement of EPA policy. Thus, it is not an ARAR at the PSY site but is a TBC. The Policy requires that spills of PCBs at unrestricted access sites be cleaned up to a level of 10 ppm, with a minimum of 10 inches of soil removed from the surface of the entire spill area and replaced with soil containing less than 1 ppm PCBs. EPA will be consistent with the first requirement by excavating and treating all soils above 5 ppm PCBs; EPA will also be consistent with the second, to the extent appropriate, by removing the surface soils in the first ten inches that are contaminated with 1-5 ppm PCBs and consolidating these soils in the hole left by the primary excavation, well below surface level. The remainder of that hole will be filled with soil that has been treated to the target cleanup levels through the solvent extraction process, and the surface of the site will be covered with clean fill and revegetated.

Regulations under the Occupational Safety and Health Act (OSHA) apply to the conduct of the remedial action as it involves workers at the site. EPA will comply with OSHA regulations including the General Industry Standards (29 CFR 1910); Safety and Health Standards (29 CFR 1926); and the substantive provisions of the Record Keeping, Reporting and Related Regulations (29 CFR 1904).

The National Primary and Secondary Ambient Air Quality Standards (40 CFR Part 50), promulgated under the Clean Air Act, are relevant and appropriate to the selected remedy. During the excavation and treatment of contaminated soils at the PSY site, and during the groundwater treatment, air emissions will be monitored and the NAAQS attained through the use of appropriate air pollution control equipment.

The selected remedy will also meet Clean Water Act requirements. No pollutants or any other materials will be discharged to surface waters. The removal of contaminated soils from the wetland area of the site (south of Gardner Creek Road) will comply with the regulations and guidelines under section 404 of the Act. EPA will avoid degradation of the wetland to the maximum extent possible and will restore the area affected by the remedial action.

b. State

The selected remedy will also attain action-specific Maine ARARs, including the Maine Freshwater Wetlands Act (38 M.R.S.A., chapter 3, sections 405-410); the Maine Hazardous Waste Regulations at 38 M.R.S.A. sections 1301 et seq., chapters 850, 851, 853-857, sections 1317 et seq., chapters 800-802, and chapter 3, article 2, section 420; Groundwater Protection Regulations at 38 M.R.S.A. chapter 3, article 4A, section 470; and Ambient Air Quality

Standards at 38 M.R.S.A. section 584, chapter 110. In addition, construction of groundwater monitoring wells will comply with Maine DEP, Bureau of Water Quality Control regulations, chapter 543, which apply only to injection wells but are relevant and appropriate to the proposed remedy.

2. Chemical-specific ARARs

In determining which contaminants at the PSY site required remediation, EPA consulted both Federal and State ARARs as well as other criteria for protectiveness. As a result, EPA has set target cleanup goals for six soil contaminants (PCBs, benzene, 1,4-dichlorobenzene, 1,2,4-trichlorobenzene, chloromethane, and chlorobenzene) and seven groundwater contaminants (PCBs, benzene, 1,4-dichlorobenzene, 1,2,4-trichlorobenzene, chlorobenzene, chloromethane, and lead).

While no ARARs apply to any of the soil contaminants and/or cleanup levels established for the PSY site, it should be noted that EPA's target cleanup level for PCBs in the soil is consistent with the TSCA Spill Cleanup Policy which is TBC. The selected cleanup levels are also consistent with one other TBC, the Maine Rules for the Land Application of Sludge and Residuals.

ARARs for the groundwater contaminants at the PSY site include the Federal Maximum Contaminant Levels (MCLs) promulgated under the Safe Drinking Water Act (40 CFR 141.11-141.16) and the State of Maine's MCLs (10-144A CMR 231) and Maximum Exposure Guidelines (MEGs) (10-144A CMR 233). Both the MCLs and MEGs are legally applicable only at the tap and not to an aquifer directly. Since, however, the groundwater at the PSY site is classified as Class IIB under the EPA groundwater protection strategy and must be considered a possible source of drinking water, the Federal MCLs are relevant and appropriate in setting cleanup levels. Similarly, Maine classifies all groundwater in the state as a minimum Class GW-A, suitable for drinking water, making the State MCLs and MEGs also relevant and appropriate. The selected groundwater remedy at the PSY site will meet the standards set by these ARARs, except that the Maine MEG for PCBs cannot be attained. Neither the groundwater remedy chosen, nor any other treatment method of which EPA is aware, is capable of ensuring the collection of the particulate-bound PCBs for treatment to the required state ARAR. Those PCBs which are collected with other contaminants will be treated, but PCB levels are expected to remain above the State MEG. EPA is therefore invoking a waiver of that state ARAR on the ground that its attainment is technologically impracticable from an engineering perspective.

Air emissions from the site will comply with the NAAQS for Particulates (40 CFR 50.6), an applicable requirement, and the

EPA Interim Policy for Planning and Implementing CERCLA Response Actions, Proposed Rule, 50 FR 45933 (November 5, 1985), a TBC.

3. Location-specific ARARs

As part of the source control portion of the remedy, EPA will be excavating some contaminated soils from one wetland area, the groundwater breakout area south of Gardner Creek Road. EPA will avoid degradation of this wetland to the maximum extent possible and will restore the area affected by the remedial action. The remedial action will comply with section 404 of the Clean Water Act and with standards set by Maine requirements, including the Maine Freshwater Wetlands Act (38 M.R.S.A. chapter 3, sections 405-410) and the Maine Hazardous Waste Management Rules (38 M.R.S.A. sections 1301 et seq., chapters 401, 800-802, 850, 851, 853-857). The remedial action will also comply with the Wetlands Executive Order (EO 11990), which is not an ARAR (because it is not a promulgated requirement) but is binding on EPA as a Federal agency. EPA has consulted with the U.S. Fish and Wildlife Service concerning the effect of the proposed remedy on the wetland area, as directed by the Fish and Wildlife Coordination Act.

The other wetlands identified in the site area will not be directly affected by site remediation activities, and EPA will ensure their protection through any necessary sedimentation and erosion controls.

The remedial action will also comply with the Maine Site Location Law (38 M.R.S.A. chapter 3, sections 481-490), which prohibits adverse impacts on certain natural resources.

C. The Selected Remedial Action is Cost-Effective

Of those remedial alternatives that are protective and attain ARARs, EPA selected a remedy that is cost-effective in mitigating the risks posed by the soil and groundwater in a reasonable period of time.

The capital cost of the source control component is estimated to be $3.42 million with no long-term annual O&M costs anticipated. This total capital cost is comprised of approximately $1.96 million for off-site incineration and $1.46 million for on-site solvent extraction. This cost is higher than that of some of the other alternatives and other combinations of alternatives evaluated; however, none of the less expensive technologies can ensure (with the same degree of certainty) that the treated soil will reach the target cleanup goals. Thus, while technologies such as dechlorination, in-situ vitrification and solvent extraction alone are cheaper than the selected combination of source control alternatives, they do not provide the same degree of confidence over the long-term. On the other hand, the selected source control remedy is less expensive than the only other equally effective alternative, on-site incineration of all soils.

The capital cost of the management of migration component of the selected remedy is estimated to be $310,000. Annual O&M costs are expected to decrease from an estimated $135,000 during the first two years, to $42,000 during years 3 through 5, and to $20,000 for years 6 to 30; the approximate total present worth costs are $947,000. This cost is less than that of the other effective alternatives studied, and will treat the target contaminants to the target levels in a shorter period of time.

D. The Selected Remedy Utilizes Permanent Solutions and Alternative Treatment or Resource Recovery Technologies to the Maximum Extent Practicable

Both the source control and management of migration components of the selected remedy are expected to provide permanent solutions to the contamination problem at the PSY site. Solvent extraction permanently removes PCBs and the other contaminants of concern from the soil, while incineration destroys these contaminants almost completely. As a result, remediation of the site soils will permanently reduce the risks associated with exposure to the soils to levels protective of human health and the environment. In addition, removal of the soil contaminants will reduce the source of groundwater contaminants, increasing the effectiveness of that component of the remedy.

Both incineration and solvent extraction are alternative treatment technologies; thus, the selected remedy also satisfies the requirement that the remedy selected utilize alternative treatment or resource recovery technologies to the maximum extent practicable.

The management of migration portion of the remedy also utilizes a treatment method which will result in the permanent removal of most target contaminants. Through the collection and treatment of the contaminated groundwater, this remedy ensures that the groundwater leaving the site is restored to a level protective of human health and the environment. Use of institutional controls will also ensure that the on-site groundwater poses no risk.

E. The Selected Remedy Satisfies the Preference for Treatment as a Principal Element

By incinerating the soils with the highest concentration of contaminants and treating the rest of the soil above the target cleanup levels through a solvent extraction process, the selected remedy addresses the principal threat posed by the site soils through the use of treatment technologies. In addition, the principal threat posed by groundwater contamination at the site will be addressed primarily through treatment of the groundwater. The selected remedy thus satisfies the preference for treatment as a principal element of the Superfund remedy.

XII. STATE ROLE

The State of Maine, Department of Environmental Protection (DEP) has reviewed the various alternatives and has indicated its support for the selected remedy. The State has also reviewed the Supplemental Remedial Investigation, Public Health Evaluation, and Feasibility Study to determine if the selected remedy is in compliance with applicable or relevant and appropriate State environmental laws and regulations. The State of Maine concurs with the selected remedy for the Pinette's Salvage Yard site. A copy of the declaration of concurrence is attached as Attachment D to this ROD. In accordance with Section 104 of CERCLA, the State of Maine is responsible for at least 10 percent of the costs of the remedial action, including all future maintenance.

ATTACHMENT A

PINETTE'S SALVAGE YARD SUPERFUND SITE
ROD DECISION SUMMARY

ADMINISTRATIVE RECORD INDEX

Pinettes Salvage Yard
NPL Site Administrative Record

Index

Compiled: January 27, 1989
Updated: March 10, 1989
ROD Signed: May 30, 1989

Prepared for

Region I
Waste Management Division
U.S. Environmental Protection Agency

With Assistance from

EBASCO SERVICES, INC.
211 Congress Street, Boston, Massachusetts 02110

Introduction

This document is the Index to the Administrative Record for the Pinette's Salvage Yard National Priorities List (NPL) Site. Section I of the Index cites site-specific documents, and Section II cites guidance documents used by EPA staff in selecting a response action at the site.

The Administrative Record is available for public review at EPA Region I's Office in Boston, Massachusetts, and at the Washburn Town Hall, Main Street, Washburn, Maine 04786. Questions concerning the Administrative Record should be addressed to the EPA Region I site manager.

The Administrative Record is required by the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), as amended by the Superfund Amendments and Reauthorization Act (SARA).

Section I

Site-Specific Documents

ADMINISTRATIVE RECORD INDEX
for the
Pinette's Salvage Yard NPL Site

1.0 Pre-Remedial

1.12 Hazard Ranking Package

1. "Documentation Records for Hazard Ranking System," EPA Region I (May 9, 1983).
2. "Documentation Record for Hazard Ranking System" (Adjusted Final), EPA Region I (May 24, 1983).

2.0 Removal Response

2.1 Correspondence

1. Memorandum from Daniel Granz, EPA Region I to Barbara Ikalainen, EPA Region I (September 23, 1982). Concerning PCBs in Washburn, Maine.

2.3 Sampling and Analysis Data

1. PCB laboratory results of Washburn wells, town water and river water samples, Laboratory Services, Maine Department of Environmental Protection (November 3, 1982).
2. Memorandum from David McIntyre, EPA Region I to John Hackler, EPA Region I (December 20, 1982). Concerning PCB laboratory results of soil and surface water samples collected from Pinette's Salvage Yard.
3. Memorandum from Peter Kahn, EPA Region I to Donald Berger, EPA Region I (November 22, 1983). Concerning air sampling investigation for PCBs at Washburn, Maine.

* Other Sampling and Analysis Data may be reviewed, by appointment only, at EPA Region I, Boston, Massachusetts.

2.5 On-Scene Coordinator Report

1. "On-Scene Coordinator's Report of Immediate Removal Activities," EPA Region I (October 4, 1983 - November 4, 1983). (Confidential Business Information redacted).

3.0 Remedial Investigation (RI)

3.1 Correspondence

1. Memorandum from R. Ninesteel, NUS Corporation to W.R. Adams, D. Threlfall and E.D. Escher, NUS Corporation (January 17, 1983). Concerning Washburn Ramp Site Visit.
2. Memorandum from Bill Wall, NUS Corporation to Karl Hartner, Anna Nazar, John Newton, Gil Meyer, Gary Smith and Robin Smith, NUS Corporation (January 26, 1983). Concerning Site Description Washburn RAMP.
3. Letter from George Latulippe, NUS Corporation to Don Senovich and Don Brenneman, NUS Corporation (January 30, 1985). Concerning Work Plan Memorandum.
4. Letter from Liyang Chu, NUS Corporation to Michael Jasinski, EPA Region I (October 1, 1987). Concerning revisions to the Final Field Activities Summary Report.
5. Letter from Liyang Chu, NUS Corporation to Michael Jasinski, EPA Region I (October 8, 1987). Concerning the delivery of the Final Field Activities Summary Report.
6. Letter from Michael Jasinski, EPA Region I to Mrs. Floyd Drost, Washburn resident (November 6, 1987). Concerning access to collect sample of residential well.
7. Letter from Michael Jasinski, EPA Region I to Margaret Chapman, Washburn resident (November 6, 1987). Concerning access to collect sample of residential well.
8. Letter from Michael Jasinski, EPA Region I to Rita Pinette, Washburn resident (November 6, 1987). Concerning access to collect sample of residential well.

3.1 Correspondence (cont'd)

9. Letter from Michael Jasinski, EPA Region I to Mr. and Mrs. Terry Thompson, Washburn resident (November 6, 1987). Concerning access to collect sample of residential well.
10. Letter from Michael Jasinski, EPA Region I to Mr. and Mrs. Roger Pinette, Washburn resident (November 6, 1987). Concerning access to collect sample of residential well.
11. Letter from Michael Jasinski, EPA Region I to Stephen Cox, ICF Technology, Inc. (January 11, 1988). Concerning the preparation of Pinette's Site Phase II Remedial Investigation and Feasibility Study.
12. Letter from Stephen Cox, ICF Technology, Inc. to Michael Jasinski, EPA Region I (May 25, 1988). Concerning minor deletions in the Phase II Work Plan for the Remedial Investigation and Feasibility Study.
13. Letter from Michael Jasinski, EPA Region I to Richard Gleason, Ebasco Services, Inc. (June 30, 1988). Concerning approval of Final Work Plan dated May, 1988 and Draft Field Operations Plan dated May, 1988 for the Phase II Remedial Investigation and Feasibility Study.
14. Memorandum from Michael Jasinski, EPA Region I to Richard Gleason and Lee Dixon, Ebasco Services, Inc. and Stephen Cox, ICF Technology, Inc. (July 22, 1988). Concerning request to change groundwater analysis plans.

3.2 Sampling and Analysis Data

1. Memorandum from Valerie Tillinghast, NUS Corporation to John Rendall, EPA Region I (April 14, 1986). Concerning results of analysis of tapwater samples obtained from residences near Pinette's Salvage Yard.
2. Letter from John Rendall, EPA Region I to Rita Pinette, Washburn resident (April 21, 1986). Concerning analytical results of residential well samples.
3. Letter from John Rendall, EPA Region I to Floyd Drost, Washburn resident (April 21, 1986). Concerning analytical results of residential well samples.

75

3.2 Sampling and Analysis Data (cont'd)

4. Letter from John Rendall, EPA Region I to Margaret Chapman, Washburn resident (April 21, 1986). Concerning analytical results of residential well samples.
5. Letter from John Rendall, EPA Region I to Wilson Chapman, Washburn resident (April 21, 1986). Concerning analytical results of residential well samples.
6. Letter from John Rendall, EPA Region I to Roger Pinette, Washburn resident (April 21, 1986). Concerning analytical results of residential well samples.
7. Letter from John Rendall, EPA Region I to Sheldon Richardson, Washburn resident (April 21, 1986). Concerning analytical results of residential well samples.

3.4 Interim Deliverables

1. "Remedial Action Master Plan (RAMP)," NUS Corporation (September 1983). (via transmittal letter from Dennis Escher, NUS Corporation to Elliot Thomas EPA Region I on September 20, 1983). (Confidential Business Information redacted).
2. "Final Field Operations Plan Remedial Investigation Phase I," ICF Technology, Inc. for Ebasco Services, Inc. (October 1987).
3. "Draft Technical Directive Memorandum," ICF Technology, Inc. for Ebasco Services, Inc. (February 1988). (via transmittal letter from Russell Boyd, EBASCO Services, Incorporated to Michael Jasinski, EPA Region I on February 18, 1988).
4. "Project Scoping Meeting Phase II Remedial Investigation/Feasibility Study," Ebasco Services, Inc. and ICF Technology, Inc. for EPA Region I (March 4, 1988).
5. "Final Field Operations Plan Remedial Investigation Phase II," ICF Technology, Inc. for Ebasco Services, Inc. (May 1988). NOTE: Oversize "Boring, Well and Sample Location Map Plate" is available for review, by appointment only, at EPA, Region I, Boston, Massachusetts.

3.4 Interim Deliverables(cont'd)

6. "Appendix D - Letter Addendum to Address Outstanding Agency Comments," Stephen A. Cox, REM-III Site Manager, ICF Technology, Inc. (dated November 10, 1988), addendum to the Phase II Final Field Operations Plan of May 1988.

3.6 Remedial Investigation (RI) Reports

1. "Final Field Activities Summary Report Volume I," NUS Corporation (September 30, 1987).
2. "Final Field Activities Summary Report Volume II," NUS Corporation (October 8, 1987). NOTE: Volume II consists of oversize "Plates 1-5" and is available for review, by appointment only, at EPA, Region I, Boston, Massachusetts.
3. "Final Supplemental Remedial Investigation and Public Health Evaluation Report - Pinette's Salvage Yard Site - Volume I," Ebasco Services, Incorporated (March 1989).
4. "Final Supplemental Remedial Investigation and Public Health Evaluation Report - Pinette's Salvage Yard Site - Volume II - Appendices," Ebasco Services, Incorporated (March 1989).
5. "Final Supplemental Remedial Investigation and Public Health Evaluation Report - Pinette's Salvage Yard Site - Volume III - Appendices," Ebasco Services, Incorporated (March 1989).
6. "Pinette's Salvage Final Supplemental RI Errata Addendum," EPA Region I (May 1989).

3.7 Work Plans and Progress Reports

1. "Work Plan for Pinette's Salvage Yard Remedial Investigation," NUS Corporation (September 1985).
2. Memorandum from Liyang Chu, NUS Corporation to David Frasca, EPA Region I (October 25, 1985). Concerning proposed scope of work for second round of sampling.
3. Memorandum from Liyang Chu, NUS Corporation to John Rendall, EPA Region I (May 14, 1986). Concerning proposed scope of work for third round of sampling.
4. "Final Work Plan Phase I Remedial Investigation," ICF Technology, Inc. for Ebasco Services, Inc. (October 1987).

3.7 Work Plans and Progress Reports (cont'd)

5. "Final Work Plan Phase II Remedial Investigation and Feasibility Study," ICF Technology, Inc. for Ebasco Services, Inc. (May 1988). NOTE: Oversize "Appendix C (Location Map) and Appendix D (Project Schedule) are available for review, by appointment only, at EPA, Region I, Boston, Massachusetts.
6. "Field Change Request Number 10," ICF Technology, Inc. (July 22, 1988). Concerning plans to modify well installation procedures to include deep bedrock monitoring.

3.9 Health Assesments

1. "Preliminary Health Assessment for Pinette's Salvage Yard Site," Agency for Toxic Substances and Disease Registry (ATSDR), U.S. Public Health Service (via transmittal letter from Stephen D. Von Allmen, United States Department of Health and Human Services to Linda Murphy, EPA Region I [April 20, 1989]).

4.0 Feasibility Study (FS)

4.1 Correspondence

1. Memorandum from J. Winston Porter, USEPA to Regional Administrators Regions I, II, III, IV, and IX (February 15, 1989). Concerning the Delegation of selection of remedy authority for Records of Decision scheduled for signature during the 2nd quarter of fiscal year 1989.

4.4 Interim Deliverables

1. "Remedial Investigation (RI)/Feasibility Study (FS) Scoping Meeting," Ebasco Services, Inc. and ICF Technology, Inc. (August 17, 1987).

4.6 Feasibility Study (FS) Reports

1. "Draft Final Feasibility Study Report - Pinette's Salvage Yard Site - Volume I," Ebasco Services, Incorporated (March 1989).
2. "Draft Final Feasibility Study Report - Pinette's Salvage Yard Site - Volume II - Appendices," Ebasco Services, Incorporated (March 1989).

78

4.6 Feasibility Study (FS) Reports (cont'd)

3. "Pinette's Salvage Yard Site Draft Final Feasibility Study Errata Addendum," EPA Region I (May 1989).
4. "Draft Final Feasibility Study Report - Volume I, Section 2.0, Revision I - Pinette's Salvage Yard Site Town of Washburn, Aroostook County, Maine," EPA Region I (May 1989).

4.9 Proposed Plans for Selected Remedial Action

1. "EPA Proposes Cleanup Plan for the Pinette's Salvage Yard Superfund Site," EPA Region I (March 1989).

5.0 Record of Decision (ROD)

5.1 Correspondence

1. Letter from Merrill Hohman, EPA Region I to Alan Prysunka, Maine Department of Environmental Protection (August 5, 1988). Concerning the notification of upcoming events prior to the ROD process. Attachment B, OSWER Directive 9234.1-01, can be reviewed at EPA Region I, Boston, Massachussetts.

5.2 Applicable or Relevant and Appropriate Requirements (ARARs)

1. Cross-Reference: Letter from Dean C. Marriott, Commissioner, State of Maine Department of Environmental Protection to Michael R. Deland, EPA Region I (May 24, 1989). Concerning Maine Department of Environmental Protection's concurrence with EPA Region I's Remedial Action remedy selection for the Pinette's Salvage Yard Site, including the State's requirements for concurrence. [Filed and cited as entry number 1 in 5.4 Record of Decision (ROD) as Attachment D].

5.3 Responsiveness Summaries

1. Letter from Dean C. Marriott, Maine Department of Environmental Protection to Michael Jasinski, EPA Region I (April 11, 1989). Concerning review and comments on the Proposed Plan, the Remedial Investigation and Feasibility Study.

5.3 Responsiveness Summaries (cont'd)

2. Letter from Charles R. Smith, Regional Civil Engineer, Department of the Air Force to Michael R. Deland, EPA Region I (April 13, 1989). Concerning comments on the clean up plans for PCBs.
3. Letter from Rebecca L. Hewett, Maine Department of Environmental Protection to Michael Jasinski, EPA Region I (April 14, 1989). Concerning Addendum to Pinette's Salvage Yard Superfund Site Testimony dated April 11, 1989.
4. Letter from Rebecca L. Hewett, Maine Department of Environmental Protection to Michael Jasinski, EPA Region I (April 14, 1989). Concerning review comments on Pinette's Salvage Yard Draft Final Remedial Investigation, Feasibility Study and Proposed Plan dated March 1989.
5. Cross-Reference: "Responsiveness Summary," EPA Region I (May 1989) [Filed and cited as entry number 1 in 5.4 Record of Decision (ROD) as Attachment B].

5.4 Record of Decision (ROD)

1. "Record of Decision - Remedial Alternative Selection," EPA Region I (May 30, 1989).

9.0 State Coordination

9.1 Correspondence

1. Letter from Michael R. Deland, EPA Region I to the State Planning Office of Maine (February 19, 1985). Concerning notification of Pinette's Salvage Yard as a proposed Superfund site.
2. Letter from Harold Kimball, State Planning Office of Maine to Nancy Piligian, EPA Region I (April 26, 1985). Concerning certification of Intergovernmental Review of proposed Superfund site application.
3. Letter from Merrill S. Hohman, EPA Region I to Alan Prysunka, Maine Department of Environmental Protection (December 23, 1988). Concerning the State's involvement in the estimation of health risks.

9.1 Correspondence (cont'd)

4. Letter from Rebecca L. Hewett, Maine Department of Environmental Protection to Mr. and Mrs. Roger Pinette (January 9, 1989). Concerning telephone conversation regarding results of contaminated well water.
5. Letter from Rebecca L. Hewett, Maine Department of Environmental Protection to Michael Jasinski, EPA Region I (February 16, 1989). Concerning review comments on the Draft Proposal Plan for the Pinette's Salvage Yard Site.

11.0 Potentially Responsible Party (PRP)

11.9 PRP-Specific Correspondence

1. Letter from William Adams, EPA Region I to Kathleen Bouchard, Avon C. Brown, Inc. (September 17, 1980). Concerning subpoena and requirement to submit information regarding transportation and disposal of transformers removed from Loring Air Force Base.
2. Letter from William Adams, EPA Region I to Joseph Bellanceau (September 17, 1980). Concerning subpoena and requirement to submit information regarding transportation and disposal of transformers removed from Loring Air Force Base.
3. Letter from William Adams, EPA Region I to Francis Bellanceau (September 17, 1980). Concerning subpoena and requirement to submit information regarding transportation and disposal of transformers removed from Loring Air Force Base.
4. Letter from William Adams, EPA Region I to Kirk Soderberg, Soderberg Construction (September 17, 1980). Concerning subpoena and requirement to submit information regarding transportation and disposal of transformers removed from Loring Air Force Base.
5. Letter from William Adams, EPA Region I to Iver Soderberg, Soderberg Construction (September 17, 1980). Concerning subpoena and requirement to submit information regarding transportation and disposal of transformers removed from Loring Air Force Base.

11.9 PRP-Specific Correspondence (cont'd)

6. Letter from William Adams, EPA Region I to Roger Pinette, Pinette's Salvage Yard (September 17, 1980). Concerning subpoena and requirement to submit information regarding transportation and disposal of transformers removed from Loring Air Force Base.
7. Letter from William Adams, EPA Region I to Warren Gibbs, Northern Electric Company (September 17, 1980). Concerning subpoena and requirement to submit information regarding transportation and disposal of transformers removed from Loring Air Force Base.
8. Letter from William Adams, EPA Region I to Joseph Bellanceau (October 14, 1980). Concerning subpoena and requirement to submit information regarding transportation and disposal of transformers removed from Loring Air Force Base.
9. Memorandum to File (July 8, 1983). Concerning EPA Region I and U.S. Air Force Meeting Agenda with respect to the chronology of events at Pinette's Salvage Yard.
10. Notice of Potential Liability and Request for Information from Merrill S. Hohman, EPA Region I to Paul Philbrick, Elco Electric, Incorporated (March 6, 1989).
11. Notice of Potential Liability and Request for Information from Merrill S. Hohman, EPA Region I to Roger J. and Cynthia C. Pinette (March 6, 1989).
12. Notice of Potential Liability and Request for Information from Merrill S. Hohman, EPA region I to Mrs. Rita Pinette (March 6, 1989).
13. Notice of Potential Liability and Request for Information from Merril S. Hohman, EPA Region I to Mr. Iver Soderberg, Soderberg Construction Company (March 6, 1989).
14. Notice of Potential Liability and Request for Information from Merrill S. Hohamn, EPA Region I to Mr. Joseph Bellanceau (March 6,1989).
15. Notice of Potential Liability and Request for Information from Merrill S. Hohman, EPA Region I to Mr. Gary Vest, Deputy Assistant Secretary of the Air Force, United States Air Force (March 6, 1989).

11.9 PRP-Specific Correspondence (cont'd)

16. Routing and transmittal slip from David M. Webster, EPA Region I to David Hopkins, Jr., United States Air Force, Loring Air Force Base, Maine (March 21, 1989). Concerning transmittal of copies of Pinette's Salvage Yard Site Proposed Plan and notice letter to the Air Force.
17. Letter from Bernard Landman, USEPA to Lt. Col. Laurent R. Hourcle, United States Air Force, Bolling Air Force Base, Washington, D.C. (March 29, 1989). Concerning USAF's participation in the cleanup of the Pinette's Salvage site to be appropriate under the law.
18. Letter from Lt. Col. Laurent R. Hourcle, United States Air Force, Bolling Air Force Base, Washington, D.C. to Merrill S. Hohman, EPA Region I (April 21, 1989). Concerning United States Air Force response to EPA's Notification of Potential Liability.

13.0 Community Relations

13.1 Correspondence

1. Telephone Notes (November 16, 1982). Barbara Ikalainen, EPA Region I and Merrill Hohman, EPA Region I. Concerning placement of temporary cover and submittal of Hazard Ranking System (HRS) score for consideration on the National Priority List.
2. Telephone Notes (May 18, 1983). David Piebinan, EPA Region I and Susan Kimball, WGAM-TV Presque Isle, ME. Concerning occurrence of a meeting between EPA Region I, Maine Department of Environmental Protection, and the U.S. Air Force.
3. Telephone Notes (September 17, 1987). Michael Jasinski, EPA Region I and Susan Bernard, WGAM-TV Presque Isle, ME. Concerning receipt of fact sheet and future schedule of events.
4. Telephone Notes (September 18, 1987). Michael Jasinski, EPA Region I and Susan Bernard, WGAM-TV Presque Isle, ME. Concerning filming of the field crew and an interview with Michael Jasinski.

13.1 Correspondence (cont'd)

5. Letters from Michael Jasinski, EPA Region I to Sheldon Richardson, Washburn Town Manager; James Barressi, Northern Maine Regional Planning Commission; Gerry Bouchard, owner of Washburn Food Mart; Roger Crouse, Chairman of Washburn Planning Board; Mr. and Mrs. Terry Thompson, Washburn residents; Daryl Sperrey, Washburn resident; Mrs. Floyd Drost, Washburn resident (October 7, 1987). Concerning appreciation from EPA Region I for information relating to development of a Community Relations Plan.
6. Letter from Kathleen James, EPA Region I to Sheldon Richardson, Washburn Town Manager (June 3, 1988). Concerning receipt of the Community Relations Plan.
7. Letter from Russell Boyd, Ebasco Services, Inc. to Paul Knittel, EPA Region I (June 6, 1988). Concerning receipt of the Final Revised Community Relations Plan.
8. Letter from Michael Jasinski, EPA Region I to Mr. and Mrs. Roger Pinette (March 8, 1989). Concerning new test results of drinking water samples collected on January 11, 1989 including a copy of the analytical data sheets generated by the EPA laboratory.

13.2 Community Relations Plan

1. "Community Relations Plan for Washburn, Maine Pinette's Salvage Yard". (via routing slip from Dave Pickman, EPA Region I to Susan Santos, EPA Region I on April 26, 1983). Concerning removal action.
2. "Summary of Remedial Action Master Plan for Washburn, Maine,". Concerning removal action.
3. "Community Relations Plan for Immediate Removal at Pinette's Salvage Yard Site," Washburn, Maine.
4. Schedule of Community Relations Plan Interviews (September 24 and 25, 1987). Concerning remedial action.
5. "Final Revised Community Relations Plan Pinette's Salvage Yard-Washburn, Maine," ICF Technology, Inc. for Ebasco Services, Inc. (June 1988). Concerning remedial action.

13.3 News Clippings/Press Releases

1. "Environmental News," Concerning the Allocation of $200,000 from Superfund to Remove PCB-Contaminated Soil from Pinette's Salvage Yard, EPA Region I (October 12, 1983).
2. "Superfund Cleanup to Begin at Pinette's Salvage Yard," EPA Region I (October 12, 1983).
3. "Environmental News," Concerning the Removal of PCB-contaminated Soil from Pinette's Salvage Yard, EPA Region I (November 7, 1983).
4. EPA - Environmental News, "EPA Announces Public Meeting on Preliminary Cleanup Recommendation for Pinette's Salvage Yard Site," EPA Region I (March 6, 1989).
5. "The United States Environmental Protection Agency Invites Public Comment on the Feasibility Study and Proposed Plan for the Pinette's Salvage Yard Site in Washburn, Maine and Announces the Availability of the Site Administrative Record," EPA Region I (March 8, 1989).

13.4 Public Meetings

1. Cross-Reference: Transcript, Public Hearing (April 11, 1989) [Filed and cited as entry number 1 in 5.4 Record of Decision(ROD) in Attachment B].
2. Meeting Agenda, EPA Region I, Town of Washburn, Maine, Public Informational Meeting (includes 20 graphics presented at the meeting).

13.5 Fact Sheets

1. "Superfund Program Fact Sheet for Pinette's Salvage Yard Site in Washburn, Maine," EPA Region I (September 1987).
2. "Superfund Program Fact Sheet for Pinette's Salvage Yard Site in Washburn, Maine," EPA Region I (November 1987). (via transmittal letter from Michael Jasinski, EPA Region I to Sheldon Richardson, Town Manger, Washburn, Maine.)
3. "Superfund Program Fact Sheet for Pinette's Salvage Yard Site in Washburn, Maine," EPA Region I (June 1988).

16.0 Natural Resource Trustee

16.1 Correspondence

1. Letter from Kenneth Finkelstein, National Oceanic Atmospheric Administration to Michael Jasinski, EPA Region I (October 9, 1987). Concerning potential for National Oceanic Atmospheric Administration resources to be impacted in the Aroostook River.
2. Letter from Kenneth Finkelstein, National Oceanic Atmospheric Administration to Michael Jasinski, EPA Region I (November 5, 1987). Concerning sampling of sediments/soils in the drainage system.

16.4 Trustee Notification and Selection Guide

1. "Trustee Notification Form," EPA Region I (July 7, 1987).
2. Letter from Merrill Hohman, EPA Region I to Sharon Christopherson, National Oceanic Atmospheric Administration (July 20, 1987). Concerning EPA Region I notification about potential damages to natural resources under NOAA's jurisdiction.
3. Letter from Merrill Hohman, EPA Region I to William Patterson, Department of the Interior (July 20, 1987). Concerning EPA Region I notification about potential damage to natural resources under DOI's jurisdiction.

17.0 Site Management Records

17.4 Site Photographs/Maps

1. Draft Property Map, EPA Region I (1986). (Based upon NUS Corporation Research and Field Map).

* The records cited in entry numbers 2 through 15 may be reviewed, by appointment only, at EPA Region I, Boston, Massachusetts.

2. 3-1/2" x 5" Color Photograph Illustrating Area of Heaviest Contamination (April 1986).
3. 3-1/2" x 5" Color Photograph Illustrating Area of Heaviest Contamination and Standing Water (April 1986).

17.4 Site Photographs/Maps (cont'd)

4. 3-1/2" x 5" Color Photograph Illustrating the Field with a Groundwater Outbreak Located Across the Street from Pinette's Salvage Yard (April 1986).
5. 3-1/2" x 5" Color Photograph Illustrating Sample Collection Activities Using a Power Auger (May 1986).
6. 3-1/2" x 5" Color Photograph Illustrating the Power Auger in Use (May 1986).
7. 3-1/2" x 5" Color Photograph Illustrating the Collection of a Soil Sample from a Hand Auger (May 1986).
8. 3-1/2" x 5" Color Photograph Illustrating the Surveying of Sample Points (May 1986).
9. 3-1/2" x 5" Color Photograph Illustrating the NUS Corporation Sampling Van (May 1986).
10. 4" x 6" Color Photograph Illustrating the Field with a Groundwater Outbreak Located Across the Street from Pinette's Salvage Yard. (August 12, 1988).
11. 4" x 6" Color Photograph Illustrating Approximate Spill Area. (August 12, 1988).
12. 4" x 6" Color Photograph Illustrating Drainage Swale Emanating from Larger On-site Pond. (August 12, 1988).
13. 4" x 6" Color Photograph Illustrating the End of the Drainage Swale located Near the Culvert. (August 12, 1988).
14. 4" x 6" Color Photograph Illustrating Gravel Driveway and Garage On-site and Spill Area. (August 12, 1988).
15. 4" x 6" Color Photograph Illustrating the Larger of the Two On-site Ponds. (August 12, 1988).

17.8 State and Local Technical Records

1. Notes (author unknown) to Jack Krueger, Maine Department of Environmental Protection (August 5, 1981). Concerning sample collection activities on July 29, 1981.
2. Memorandum from Tom Potter, Maine Department of Environmental Protection to John Krueger, Maine Department of Environmental Protection (August 11, 1981). Concerning organic chemical analyses of samples from the Washburn Transformer Fluid Spill Investigation.

17.8 State and Local Technical Records (cont'd)

3. Letter from Jack Krueger, Maine Department of Environmental Protection to Andrew Lauterback, EPA Region I (August 12, 1981). Concerning concentrations of PCBs and chlorinated benzenes at the Washburn, Maine, Pinette site.
4. Letter from Jack Krueger, Maine Department of Environmental Protection to Andrew Lauterback, EPA Region I (October 22, 1981). Concerning summary of the technical aspects and cost estimate of the PCB clean-up at Washburn, Maine, Pinette site.

88

Section II

Guidance Documents

PINETTE'S SALVAGE YARD
NPL SITE ADMINISTRATIVE RECORD
GUIDANCE DOCUMENTS

EPA guidance documents may be reviewed at EPA Region I, Boston, Massachusetts.

General EPA Guidance Documents

1. "Appendix D - Protection of Wetlands: Executive Order 11990," 42 Federal Register 26961 (1977).

2. Memorandum from John W. Lyon, Toxic Substance Division, USEPA to Sanford W. Harvey, Jr., Enforcement Division, EPA Region IV (August 3, 1979). Concerning applicability of PCB regulations to spills which occurred prior to the effective date of the 1978 regulation.

3. U.S. Environmental Protection Agency. Office of Emergency and Remedial Response. Community Relations in Superfund: A Handbook (Interim Version) (EPA/HW-6), September 1983.

4. U.S. Environmental Protection Agency. Office of Solid Waste and Emergency Response. Guidance on Feasibility Studies under CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act) (EPA/540/G-85/003), June 1985.

5. U.S. Environmental Protection Agency. Office of Solid Waste and Emergency Response. Guidance on Remedial Investigations under CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act) (EPA/540/G-85/002), June 1985.

6. "National Oil and Hazardous Substances Pollution Contingency Plan," Code of Federal Regulations (Title 40, Part 300), 1985.

7. U.S. Environmental Protection Agency. Office of Emergency and Remedial Response. Superfund Remedial Design and Remedial Action Guidance (OSWER Directive 9355.0-4A), June 1986.

8. U.S. Environmental Protection Agency. Office of Research and Development. Hazardous Waste Engineering Research Laboratory. Handbook for Stabilization/Solidification of Hazardous Wastes (EPA/540/2-86/001), June 1986.

General EPA Guidance Documents (cont'd)

9. Comprehensive Environmental Response, Compensation, and Liability Act of 1980, amended October 17, 1986.

10. U.S. Environmental Protection Agency. Office of Emergency and Remedial Response. Superfund Public Health Evaluation Manual (OSWER Directive 9285.4-1), October 1986.

11. U.S. Environmental Protection Agency. Office of Emergency and Remedial Response. Draft Guidance on Remedial Actions for Contaminated Groundwater at Superfund Sites (OSWER Directive 9283.1-2), October 1986.

12. U.S. Environmental Protection Agency. Office of Solid Waste and Emergency Response. Interim Guidance on Superfund Selection of Remedy (OSWER Directive 9355.0-19), December 24, 1986.

13. U.S. Environmental Protection Agency. Office of Solid Waste and Emergency Response. Data Quality Objectives for Remedial Response Activities: Development Process (EPA/540/G-87/003), March 1987.

14. "Part 761 - Polychlorinated Biphenyls (PCBs) Manufacturing, Processing, Distribution in Commerce, and Use Prohibitions," 40 Code of Federal Regulations 194 (July 1, 1987).

15. Memorandum from J. Winston Porter to Addressees ("Regional Administrators, Regions I-X; Regional Counsel, Regions I-X; Director, Waste Management Division, Regions, I, IV, V, VII, and VIII; Director, Emergency and Remedial Response Division, Region II; Director, Hazardous Waste Management Division, Regions III and VI; Director, Toxics and Waste Management Division, Region IX; Director, Hazardous Waste Division, Region X; Environmental Services Division Directors, Region I, VI, and VII"), (July 9, 1987). Concerning interim guidance on compliance with applicable or relevant and appropriate requirements).

16. Memorandum from Stephen Joyce and Jamie Katz, EPA Region I to Merrill Hohman and Patricia Meaney, EPA Region I (July 24, 1987). Concerning the evaluation of the Toxic Substances Control Act (TSCA) Requirements as Applicable or Relevant and Appropriate Requirements (ARARs) for the Re-Solve, Inc. Superfund Site.

General EPA Guidance Documents (cont'd)

17. U.S. Environmental Protection Agency. Office of Health and Environmental Assessment. A Compendium of Technologies Used in the Treatment of Hazardous Waste (EPA/625/8-87/014), September 1987.

18. Memorandum from Denise M. Keehner, Chemical Regulation Branch, USEPA to Bill Hanson, Site Policy and Guidance Branch, USEPA (October 14, 1987). Concerning comments on the PCB Contamination-Regulatory and Policy Background Memorandum.

19. "Guidelines for PCB Levels in the Environment," The Hazardous Waste Consultant, pp. 26-32 (January/February 1988).

20. Memorandum from Christopher Zarba, USEPA to Jane Downing, EPA Region I (April 11, 1988). Concerning the application of Interim sediment critieria values at Sullivan's Ledge Superfund Site.

21. U.S. Environmental Protection Agency. Office of Emergency and Remedial Response. Draft Guidance on Remedial Actions for Contaminated Groundwater at Superfund Sites (OSWER Directive 9283.1-2), April 1988.

22. "Summary of the Requirements: Land Disposal Restrictions Rule," EPA Region I (no date listed).

Pinette's Salvage Yard NPL Site Specific Guidance Documents

1. "Classification of Surface Waters," Maine Department of Environmental Protection (September 1979).

2. "Project Summary: Report on the Feasibility of APEG Detoxification of Dioxin-Contaminated Soils," Albert Klee, Charles Rogers, and Thomas Tiernan, EPA Region V (April 1984).

3. U.S. Environmental Protection Agency. Office of Health and Environmental Assessment. Risk Analysis of TCDD Contaminated Soil (EPA-600/8-84-031), 1984.

4. Record of Decision, Wide Beach, New York, EPA Region II, New York, New York (September 30, 1985).

Site Specific Guidance Documents (cont'd)

5. "Project Summary: Destruction of PCBs-Environmental Applications of Alkali Metal Polyethylene Glycolate Complexes," Frank J. Iaconianni, EPA Region V (December 1985).

6. "Chemical Reaction of Polychlorinated Biphenyls on Soils with Poly(Ethylene Glycol)/KOH," D.J. Brunelle and Daniel A. Singleton, General Electric Corporate Research and Development (1985).

7. "PCB Destruction: A Novel Dehalogenation Reagent," Alfred Kornel and Charles Rogers, EPA Region V (1985).

8. Enforcement Decision Document, Pepper Steel, Florida, EPA Region IV, Atlanta, Georgia (March 19, 1986).

9. U.S. Environmental Protection Agency. Office of Health and Environmental Assessment. Development of Advisory Levels for Polychlorinated Biphenyls (PCBs) Cleanup (OHEA-E-187), May 1986.

10. "Ground Water Classification System," Land and Water Resources Council (May 1986).

11. "In Situ Vitrification of PCB-Contaminated Soils," Electric Power Research Institute (EPRI) (prepared by Battelle, Pacific Northwest Laboratories) (October 1986).

12. "Guidelines for Ground-Water Classification under the EPA Ground-Water Protection Stategy," USEPA (December 1986).

13. "Chemical Destruction of Chlorinated Dioxins and Furans," (Abstract) EPA Region 5, Charles J. Rogers & Alfred Kornel, EPA Region V (1986).

14. "Project Summary: PCB Sediment Decontamination-Technical/Economic Assessment of Selected Alternative Treatments," Ben H. Carpenter, EPA Region V (March 1987).

15. "Project Summary: Catalytic Dehydrohalogenation: A Chemical Destruction Method for Halogenated Organics," EPA Region V (March 1987).

16. "PCB Spill Cleanup Policy," (40 CFR Part 761), Federal Register, (April 2, 1987).

Site Specific Guidance Documents (cont'd)

17. "Chemical Destruction ofHalogenatedAliphatic Hydrocarbons" (United States Patent Number 4,675,464), Charles J. Rogers and Alfred Kornel, EPA Region V (June 23, 1987).

18. Memorandum (to Water Division Pinette's Superfund Site Review Team,) EPA Region I from Anthony Pisanelli, EPA Region I (August 18, 1987). Concerning handout from Pinette's Feasibility Study (FS) Scoping Meeting.

19. Record of Decision, Liquid Disposal, Incorporated, Utica, Michigan, EPA Region V, Chicago, Illinois (September 30, 1987).

20. U.S, Environmental Protection Agency. Office of Solid Waste and Emergency Response. The Superfund Innovative Technology Evaluation Program: Progress and Accomplishments (EPA/540/5-88/001), February 1988.

21. Memorandum from Alfred Kornel, EPA Region V to Charles J. Rogers, EPA Region V (June 24, 1988). Concerning analysis of KPEG/Guam Soil PCB Detoxification from the Guam Field Test.

22. Letter from James E. Hansen, Geosafe Corporation to Michael Jasinski, EPA Region I (July 13, 1988). Concerning information on in Situ Vitrification Technology.

23. Record of Decision, Rose Disposal Pit, Lanesborough, Massachusetts, EPA Region I, Boston, Massachusetts (September 23, 1988).

24. "Laboratory Scale Testing Report: KPEG Processing of Wide Beach Development Site Soils," Galsen Research Corporation (September 30, 1988).

25. Letter from Alfred Kornel, EPA Region V to Charles J. Rogers, EPA Region V (October 13, 1988). Concerning Guam II, Retreatment of Guam Soils and the Continuation of APEG for PCB Detoxification.

26. Letter from Lanny D. Weimer, Resources Conservation Company to Angelo L. Masullo, ICF Technology, Incorporated (December 16, 1988). Concerning technical paper entitled "Basic Extractive Sludge Treatment (B.E.S.T.)* - Demonstrated Available Technology."

Site Specific Guidance Documents (cont'd)

27. "PCB Sediment Decontamination Processes Selection for Test and Evaluation," Ben H. Carpenter, Engineering Research Applications and Donald L. Wilson, EPA Region V (1988).

28. "Evaluation of the B.E.S.T.* Solvent Extraction Sludge Treatment Technology Twenty-Four Hour Test," Gerard W. Sudell, Enviresponse, Incorporated (no date listed).

29. "Guidance for Compliance with Requirements of the Safe Drinking Water Act," Chapter 3 of the Draft Clean Water Act/Safe Drinking Water Act (CWA/SWDA) Volume of the Superfund Compliance Manual (no date listed).

30. "Draft Standard Review Plan Information Requirements" (no date listed).

31. "A Summary of Bioassay Tests on APEG Byproducts," (no date listed).

32. "Field Experience with the KPEG Reagent," (Abstract) Alfred Kornel, Charles J. Rogers and Harold Sparks, EPA Region V.

5

ATTACHMENT C

PINETTE'S SALVAGE YARD SUPERFUND SITE
ROD DECISION SUMMARY

SITE-SPECIFIC PCB SOIL
RISK CALCULATIONS AND CLEANUP LEVEL

U.S. ENVIRONMENTAL PROTECTION AGENCY
SUGGESTED HUMAN HEALTH RISK-BASED SOIL TARGET CLEANUP LEVELS FOR THE PINETTE'S SALVAGE YARD SITE

Key contaminant(s): PCBs

Exposure of concern:
70 years-lifetime
soil ingestion, plus dermal contact
frequency of contact 100 days/365 days
body weight 70 kg

Effect of concern: cancer

Target risk level: 10-5 PCBs (total)

Exposure Parameters:
soil ingestion rate: 100 mg/day (see attached OSWER Directive 9850.4)
oral absorption-soils: 30% semi-VOCs
dermal contact rate: 500 mg soil/day
dermal absorption-soils: 5% semi-VOCs

Soil Intake averaged over a lifetime:

Oral Intake + Dermal Intake

SI = [(100 mg soil/day x 0.30) + (500 mg soil/day x 0.05)] x [100 days % 365 days] x [1 % 70 kg] x [70 yrs % 70 yrs]

SI = [(30 mg soil/day) + (25 mg soil/day)] x [100 days % 365 days] x [1 % 70 kg] x [70 yrs % 70 yrs]

SI = 0.22 mg soil/kg body-weight/day over a 70 yr lifetime

Target Risk Level = 10-5 PCBs (total)

PCB Target Chronic Daily Intake = [PCB target risk level % PCB potency factor]

CDI (PCBs) = [10-5 % 7.7 (mg PCB/kg/day)-1]

CDI (PCBs) = 1.3 x 10-6 mg PCB/kg/day

Target Cleanup Level (PCBs) = [PCB target chronic daily intake (CDI)] % soil intake (SI)]

= [1.3 x 10-6 mg PCB/kg/day % 0.22 mg soil/kg/day]

Target Cleanup Level (PCBs) -= 6 ug PCBs/g soil -= 6 ppm PCBs (@ 10-5 total target risk level)

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

JAN 27 1989

OFFICE OF
SOLID WASTE AND EMERGENCY RESPONSE

OSWER Directive 9850.4

MEMORANDUM

SUBJECT: Interim Final Guidance for Soil Ingestion Rates

Porter

FROM: J. Winston Porter
Assistant Administrator

TO: Regional Administrators
Regions I-X

Executive Summary:

Risk assessments are conducted at Superfund sites as part of Remedial Investigations required by the Proposed National Contingency Plan, and may be conducted at RCRA facilities undergoing corrective action as described in the soon-to-be Proposed RCRA Corrective Action Rule, to estimate the risk from exposure to substances. Within the risk assessment, an exposure assessment is performed which is based on various exposure assumptions such as soil ingestion rates. This interim final guidance provides recommended soil ingestion rate assumptions of 0.2 gram per day for children aged 1 year through 6 years and 0.1 gram per day for older age groups, in the absence of site specific data.

Introduction and Background:

Current Agency guidance that might be used within the OSWER programs for developing risk assessments provides ranges of different soil ingestion rates. However, no guidance is provided regarding the selection of an ingestion rate from within these ranges. In order to promote consistency within Agency guidance and the use of realistic, conservative exposure scenarios throughout the CERCLA and RCRA programs, this interim final guidance provides specified assumptions to be made for soil ingestion rates for both children and adults.

Interim Final Guidance for Soil Ingestion Rates:

This interim final guidance supersedes previous program related guidance (Superfund Public Health Evaluation Manual, October, 1986, OSWER Directive 9285.4-01) only with reference to soil ingestion rates and should be used by regional staff who are responsible for conducting and evaluating risk assessments in OSWER related programs. This interim final guidance is based on the most recent reliable data available on soil ingestion rates. It may be revised to reflect new data the Agency may review that would significantly affect risk assessment results.

In developing exposure scenarios used in program risk assessments, a soil ingestion rate of 0.1 grams per day should be used for adults and a soil ingestion rate of 0.2 grams per day should be used for children who are one year through six years of age. These rates are based on the most recent reliable data reviewed by the Agency, and represent reasonably conservative values. This guidance does not address children who exhibit abnormal mouthing behavior (pica). The occurrence of pica behavior and the associated rates of soil ingestion have not been well defined. Without this information, risk cannot be quantified for children with pica behavior.

There may be cases where site- or facility-specific data exist on soil ingestion rates or the occurrence of pica behavior of children. In these cases, deviation from this guidance may be appropriate. However, the data supporting this deviation should be provided within the related risk assessment. If the data are provided by the potentially responsible party in the Superfund program or the owner/operator in the RCRA program, these data should be reviewed and verified by the risk assessment experts in the Regions, who may also choose to consult with Headquarters.

Contacts:

If there are any general questions regarding this interim final guidance, please contact Sherry Sterling, (FTS) 382-4826, of my staff. For program specific information, the following staff may be contacted:

RCRA	Alec McBride	(FTS)382-7045
CERCLA/Fund	Dave Bennett	(FTS)475-9486
CERCLA/Enforcement	Sherry Sterling	(FTS)382-4826

cc: Bruce Diamond, OWPE
Henry L. Longest II, OERR
Sylvia Lowrance, OSW
Timothy Fields, ERD
Stephen Lingle, HSED
Russell H. Wyer, HSCD
Joseph Carra, PSPD
David Bussard, WMD
Lloyd Guerci, CED
Susan Bromm, RED
Directors, Waste Management Divisions, Regions I, IV, V, VII, VIII
Director, Emergency and Remedial Response Division, Region II
Directors, Hazardous Waste Management Divisions, Region III VI
Director, Toxics and Waste Management Division, Region IX
Director, Hazardous Waste Division, Region X
CERCLA Branch Chiefs, Regions I-X
RCRA Branch Chiefs, Regions I-X

ATTACHMENT D

PINETTE'S SALVAGE YARD SUPERFUND SITE
ROD DECISION SUMMARY

STATE OF MAINE DECLARATION
OF CONCURRENCE LETTER

STATE OF MAINE
Department of Environmental Protection
MAIN OFFICE: RAY BUILDING, HOSPITAL STREET, AUGUSTA
MAIL ADDRESS: State House Station 17, Augusta, 04333
207-289-7688

JOHN R. McKERNAN, JR.
GOVERNOR

DEAN C. MARRIOTT
COMMISSIONER

May 24, 1989

Michael Deland
Regional Administrator
U. S. EPA
Region I (RAA-2203)
J. F. Kennedy Federal Bldg.
Boston, Massachusetts 02203-2211

RE: Pinette Salvage Yard Site in Washburn, Maine

Dear Mike:

The Maine Department of Environmental Protection (Department) has reviewed the May 3, 1989 Draft Record of Decision (ROD) with regard to the Remedial Action remedy selection for the Pinette's Salvage Yard Site in Washburn, Maine.

Based on that review, the Department concurs with the selected remedy of off-site incineration for soils contaminated at levels greater than 50 ppm, PCBs, on-site solvent extraction for soils contaminated with PCB levels between 5 to 50 ppm, burial of soils contaminated with PCB levels between 1 and 5 ppm, and expedited groundwater recovery and treatment. This concurrence is based upon an understanding that:

A. The Department will be afforded reasonable opportunity to review and approve of operational designs and monitoring plans for the site cleanup;

B. An institutional control (e.g. deed restriction) be established on the site that restricts or prohibits the installation of groundwater wells except as necessary to effect the site clean up, or the excavation or disturbing of soil in any and all areas on the site where PCB-contaminated soils were excavated;

C. The groundwater extraction and treatment system will be designed to remove and treat all identified contaminants present in the groundwater, including without limitation, PCBs. While the Department recognizes that achieving a groundwater cleanup level of 0.5 ppm for PCBs may be technically impracticable, the Department will defer judgement on this issue until the treatment system has been designed and installed and its effectiveness evaluated by my staff.

D. The Department's financial obligations for this Site, when committed after completion and review of the remedial design, will be limited to a maximum of ten (10) percent of the costs of the remedial action, including all future maintenance. Based upon the draft ROD, the Department's share of the costs will be approximately $423,000. The Department will assume financial responsibility for operation or maintenance of the groundwater extraction and treatment system, beginning with the eleventh (11th) year after commencement of operation of such system, should continued operation be required to meet the established cleanup goals. Those funds will be allocated by the Department from the Uncontrolled Hazardous Substance Sites Bond Account.

As a final note, it is the Department's understanding that the Town of Washburn has reviewed and is supportive of the proposed remedy selection.

Sincerely,

Samuel M [illegible] for

Dean C. Marriott
COMMISSIONER

DCM/eg

ATTACHMENT B

PINETTE'S SALVAGE YARD SUPERFUND SITE
ROD DECISION SUMMARY

RESPONSIVENESS SUMMARY

EPA WORK ASSIGNMENT NUMBER: 148-1L34
EPA CONTRACT NUMBER: 68-01-7250
EBASCO SERVICES INCORPORATED

FINAL RESPONSIVENESS SUMMARY

PINETTE'S SALVAGE YARD SUPERFUND SITE
WASHBURN, MAINE

MAY 1989

Prepared By:

Kristina M. Sepetys

Kristina M. Sepetys
Community Relations Specialist
REM III/ICF Incorporated

Approved By:

Russell H. Boyd, Jr., P.E.
REM III Regional Manager
Region I
Ebasco Services, Inc.

TABLE OF CONTENTS

PREFACE 1

I. OVERVIEW OF THE PREFERRED ALTERNATIVE AND OTHER REMEDIAL ALTERNATIVES CONSIDERED IN THE FEASIBILITY STUDY 3

II. BACKGROUND ON COMMUNITY INVOLVEMENT AND CONCERNS 4

III. SUMMARY OF COMMENTS RECEIVED DURING THE PUBLIC COMMENT PERIOD AND EPA RESPONSES TO THESE COMMENTS 5

A. STATE OF MAINE COMMENTS 5
B. COMMENTS FROM THE PRPs 8

IV. SUMMARY OF CONCERNS RAISED BY A LOCAL OFFICIAL DURING THE FORMAL COMMENT PERIOD AND INFORMAL QUESTION AND ANSWER PERIOD OF THE April 11, 1989 PUBLIC HEARING AND EPA RESPONSES TO THESE COMMENTS 11

ATTACHMENT A - COMMUNITY RELATIONS ACTIVITIES AT THE PINETTE'S SALVAGE YARD SITE

ATTACHMENT B - COMPLETE TEXT OF STATE OF MAINE COMMENTS

ATTACHMENT C - COMPLETE TEXT OF PRP COMMENTS

ATTACHMENT D - COMPLETE TEXT OF THE PUBLIC HEARING TRANSCRIPT

ATTACHMENT E - EPA'S RESPONSES TO FINAL SUPPLEMENTAL RI COMMENTS

Preface

The U.S. Environmental Protection Agency (EPA) held a public comment period between March 15, 1989 and April 14, 1989 for interested parties to comment on the Supplemental Remedial Investigation (Supplemental RI), Feasibility Study (FS), and Proposed Plan for the Pinette's Salvage Yard Superfund site. The Supplemental RI, released by EPA in March 1989, examined the nature and extent of contamination at the site. The FS, also released by EPA in March 1989, examined and evaluated various cleanup options, called remedial alternatives, for addressing the contamination at the site.

EPA announced its preliminary recommendation of a preferred alternative for the cleanup of the site in the Proposed Plan issued at the start of the public comment period.

The purpose of this Responsiveness Summary is to document EPA responses to the comments and questions raised during the public comment period. EPA considered all of the comments summarized in this document before selecting a final remedial alternative for the Pinette's Salvage Yard site.

This Responsiveness Summary is divided into the following sections:

I. Overview of the Preferred Alternative and Other Remedial Alternatives Considered in the Feasibility Study - This section briefly outlines the remedial alternatives, including EPA's preferred alternative, that are described and evaluated in detail in the FS and the Proposed Plan.

II. Background on Community Involvement and Concerns - This section provides a brief history of the site and of community interests and concerns regarding the Pinette's Salvage Yard site.

III. Summary of Comments Received During the Public Comment Period and EPA Responses to These Comments - This section summarizes both written and oral comments received by EPA during the public comment period and provides EPA's responses to them. These comments are organized in two categories: A) comments from the State of Maine (excluding those pertaining to the Supplemental RI which are included in Attachment E); and B) comments from potentially responsible parties (PRPs).

IV. Summary of Concerns Raised by a Local Official During the Formal Comment Period and Informal Question and Answer Period of the April 11, 1989 Public Hearing and EPA Responses to these Comments - This section summarizes questions raised after the close of the formal public comment portion of the April 11, 1989 public hearing during which EPA accepted formal comments. This section also provides EPA responses to these questions.

This Responsiveness Summary also includes the following attachments:

Attachment A - This attachment lists the community relations activities conducted by EPA during the recent remedial efforts performed at the Pinette's Salvage Yard site.

Attachment B - This attachment consists of the complete text of written comments offered by the State of Maine.

Attachment C - This attachment includes the complete text of written comments received from PRPs.

Attachment D - This attachment consists of the complete text of the April 11, 1989 Public Hearing transcript.

Attachment E - This section contains EPA's responses to Final Supplemental RI comments.

I. OVERVIEW OF THE PREFERRED ALTERNATIVE AND OTHER REMEDIAL ALTERNATIVES CONSIDERED IN THE FEASIBILITY STUDY

EPA's Preferred Alternative for the Pinette's Salvage Yard Site

EPA has developed a comprehensive three-part cleanup plan to address soil and groundwater contamination at the Pinette's Salvage Yard site. The preferred alternative is a combination of two source control (SC) alternatives designed to address the soil contamination problems at the site and a management of migration (MM) alternative designed to address the migration of groundwater contamination at the site.

EPA's preferred alternative involves the excavation and treatment by off-site incineration and on-site solvent extraction of the PCB- and other organic chemical-contaminated soils until they meet required target cleanup levels. In addition, the overall site remedial alternative involves collection and treatment by carbon adsorption of the contaminated deep groundwater. The shallow groundwater will be treated (if necessary) following soil excavation.

Other Alternatives Evaluated in the Feasibility Study

The FS prepared by EPA for the Pinette's Salvage Yard site identifies and evaluates three MM alternatives and seven SC remedial alternatives for achieving EPA's cleanup objectives for the site.

The Proposed Plan, which identifies the alternatives EPA recommended for the site, also contains brief descriptions of each of the alternatives considered in detail in the FS. These SC and MM alternatives, including the preferred alternatives identified in the Proposed Plan, are listed below. More complete descriptions of these alternatives are contained in the FS and Proposed Plan for the site, which are available as part of the Administrative Record for the site at the Washburn Town Offices and the EPA Records Center at 90 Canal Street, Boston, Massachusetts.

1. SOURCE CONTROL ALTERNATIVES

The purpose of implementing an SC alternative at the Pinette's Salvage Yard site is to address soil contamination, which is considered to be a source of groundwater contamination. The FS for the Pinette's Salvage Yard site evaluated the seven SC alternatives listed below.

#1. Minimal No-Action
#2. On-Site Capping with Slurry Wall
#3. Off-site Landfill of Contaminated Soils
#4. Incineration (included in EPA's Preferred SC

Alternative)
#5. On-site Solvent Extraction (included in EPA's Preferred SC Alternative)
#6. On-site Dechlorination
#7. In-Situ Vitrification

2. MANAGEMENT OF MIGRATION ALTERNATIVES

The FS also evaluated three MM alternatives to manage the migration of contaminants by collecting and treating contaminated groundwater to prevent the spread of contamination. These alternatives are listed below.

#1. Minimal No-Action
#2. Groundwater Collection and Treatment
#3. Expedited Groundwater Collection and Treatment (EPA's Preferred MM Alternative)

II. BACKGROUND ON COMMUNITY INVOLVEMENT AND CONCERNS

In June 1979, three electrical transformers were brought to the Pinette's Salvage Yard site from Loring Air Force Base, located near Limestone, Maine. The transformers were alleged to have been ruptured at the site, spilling an estimated 1,000 gallons of dielectric fluid containing polychlorinated biphenyls (PCBs) onto the soil. Residents first became aware of possible contamination problems at the Pinette's Salvage Yard site shortly after the spill occurred.

Preliminary investigations by the Maine Department of Environmental Protection (DEP) revealed that hundreds of gallons of PCBs were spilled at the site, rather than a small spill, as was initially reported by the local news media. According to several local officials, residents' anger directed against the government and the Air Force Base increased as Loring officials apparently refused to acknowledge any responsibility for the spill or take any part in cleanup efforts.

EPA and DEP attempts to include Loring Air Force Base in plans for the investigation and cleanup of the spill delayed any significant action at the site until pressure from federal and state elected officials helped initiate preliminary site investigations by the DEP and EPA in 1982.

Though town officials report that residents were angered by the situation at the site prior to EPA's removal action in 1983, residents did not formally organize to force EPA to take action. According to regional and local officials and citizens, there are no major civic or environmental organizations that are particularly visible or active in the Aroostook County region.

110

Between the time that EPA completed the removal action in late 1983 and the present, the site has generated little interest or comment among residents. This lack of interest can be attributed to the perception that, since the removal action, the site does not present a threat to public health or the environment.

III. SUMMARY OF COMMENTS RECEIVED DURING THE PUBLIC COMMENT PERIOD AND EPA RESPONSES TO THESE COMMENTS

This Responsiveness Summary summarizes the comments received by EPA concerning the Supplemental RI, the FS and the Proposed Plan for the Pinette's Salvage Yard site. Three sets of written comments were received from the State of Maine, and one set was received from the potentially responsible parties (PRPs). Copies of the hearing transcript are available in the site Administrative Record located at the Washburn Town Offices and the EPA Records Center in Boston, Massachusetts. The hearing transcript is also included in Attachment D to this document.

The comments are summarized and organized into the following two sections: A) Comments from the State of Maine; and B) Comments from PRPs.

A. STATE OF MAINE COMMENTS

The full text of comments offered by the State of Maine is appended as Attachment B to this document.

A. Comments on the Proposed Plan

Comment 1. The Maine Department of Environmental Protection (DEP) stated at the public hearing that they concur with EPA's selection of the MM Alternative #3: Expedited Groundwater Collection and Treatment. However, the DEP expressed the belief that, to be certain that all groundwater contamination from this site has been fully remediated, residential wells near the site must be included in the assessment of the site that will be performed within five years following the completion of the remediation program.

EPA's Response: EPA agrees with this comment, particularly since all residents along Gardner Creek Road are presently relying on private residential well water for drinking water purposes, and no municipal water supply is currently available near the site. Accordingly, as Section 121(c) of CERCLA indicates, those residential wells located in close proximity to the site will be included in the review of the site conditions and selected remedial actions no less often than each 5 years after the initiation of the remedial actions to assure that public health and the environment are being protected.

Comment 2. The DEP stated at the public hearing that they concur with the combination of SC Alternatives #4: Off-Site Incineration and #5: On-Site Solvent Extraction, as proposed by EPA. However, the DEP advocates imposition of an institutional control on the site that prohibits any and all excavated areas from being disturbed for any reason without the prior written approval of the DEP commissioner.

EPA's Response: EPA understands that DEP's comment is based on a risk assessment that uses different assumptions than those EPA used in determining the potential risks to human health at the Pinette's site. Based on EPA's site-specific risk assessment, the Agency has determined that the institutional control proposed by the DEP is not necessary to protect human health. The target cleanup level selected for PCBs in soil at this site (5 [parts per million] ppm, maximum value anywhere on the site) will ensure protection of public health, even if the surface soils are disturbed.

Comment 3. DEP stated that, because the DEP continues to be active in all site-related studies and decisions, EPA should note on all public documents that decisions are being made "in conjunction with the DEP."

EPA's Response: EPA agrees with DEP's comment, and wishes to acknowledge the DEP's valuable input provided throughout the RI/FS/ROD process for this site. EPA will therefore, whenever appropriate, make the necessary insertion to all future documents to indicate the DEP's active role in the Pinette's site activities.

Comment 4. The DEP observed that the "subsequent sampling of the well" referred to on page 5 of the Proposed Plan under the residential well water section, occurred in January 1989, not in December 1988.

EPA's Response: EPA acknowledges this comment by DEP, and will make the required correction when referring to this matter in the future. Additionally, the ROD has accordingly corrected this oversight.

Comment 5. The DEP requested that EPA clearly state that solvent extraction will be conducted "on-site," to clarify that it will not be performed off-site, and to reduce possible confusion with incineration, which will be performed off-site.

EPA's Response: EPA agrees with DEP's clarification as noted herein. The solvent extraction process included in the selected remedy for this site will occur within the Roger Pinette property located along Gardner Creek Road; whereas, the off-site incineration of soils containing greater than 50 ppm PCBs will occur at a TSCA-permitted incineration facility such as those located in Texas and Illinois.

Comment 6. The DEP asked that EPA ensure that items defined in the Glossary be in bold print in the text and vice versa.

EPA's Response: EPA generally complied with this suggestion in the Proposed Plan for the Pinette's Salvage Yard site; however, EPA agrees that in a few instances, due to oversight, this was not properly accomplished. To the extent that this comment is suggesting that the same approach be taken for the ROD, EPA notes that the purpose of a Proposed Plan is to explain the proposed remedy to the public and invite comment. The glossary is included there to explain the meaning of terms to laypersons in order to assist them in preparing comments. A glossary will not be included in the ROD.

Comment 7. The DEP urged EPA to pursue any and all potentially responsible parties, particularly Loring Air Force Base.

EPA's Response: EPA issued four general notice/information request/demand letters and two information request letters on March 6, 1989 to potentially responsible parties involved in the Pinette's site. Most parties have responded to these letters, including the Department of Defense (DOD), as of May 1, 1989. These responses are being reviewed and assessed by EPA regarding the enforcement/liability case involving each of these parties. EPA will continue to keep DEP involved and informed of EPA's decisions on this matter as they occur.

B. Comments on the Draft Final Feasibility Study (FS)

Comment 1. The DEP stated that they do not agree with the risk assessment in the Draft Final FS. The DEP, in its January 1989 comment letter (Comments #1e, 1f and 8) advocated the use of more conservative risk assessment assumptions and continues to recommend their use at the Pinette's site.

EPA's Response: EPA believes that the use of the risk assessment assumptions advocated by the state, which were considered by EPA and are presented in Volume II-Appendix A of the FS, would result in an overestimate of the current and/or potential future risks present at the Pinette's Salvage Yard site. However, EPA also understands that the DEP's preference for satisfying their State's public health policies must be seriously considered in establishing cleanup levels at this site. This was discussed among EPA and DEP staff on several occasions and was the major reason for establishing the ultimate target cleanup level for PCBs at this site at 5 ppm, maximum value. Nonetheless, EPA notes that the risk assessment it conducted for this site was performed in accordance with the requirements of CERCLA (as amended by SARA), the NCP, and all current Agency-wide policies and directives.

B. COMMENTS FROM THE PRPs

Written comments were submitted by the U.S. Department of Defense, Department of the Air Force - one of the PRPs at the site. The full text of these written comments is appended as Attachment C of this document. Below is a summary of these PRP comments and detailed EPA responses to these comments.

Comment 1. The Air Force expressed their belief that the target cleanup level for PCBs (5 ppm) for soil seems unusually strict. Specifically, the Air Force asked what additional level of protection for human health and the environment would be achieved by the proposed PCB cleanup level of 5 ppm, as compared with the TSCA residential standard of 10 ppm. The Air Force also asked how much additional soil would have to be removed and what additional costs would be incurred in meeting the 5 ppm PCB level instead of the TSCA standard of 10 ppm.

EPA's Response: EPA disagrees with the Air Forces' belief that the PCB target cleanup level selected for the Pinette's site is unusually strict, given the results of EPA's risk assessment for the site. Based upon the risks to public health that EPA (in consultation with the DEP) identified at this site and concerns further raised by the state, it is clear that the site-specific target cleanup level of 5 ppm PCBs in soil is warranted for the protection of future public health. Additionally, EPA has determined, through consultation with the U.S. Department of the Interior, Fish & Wildlife Service, that the 10 ppm PCB cleanup level advocated by the Air Force would not be protective of the environment at the Pinette's site. Furthermore, the TSCA level stated by the Air Force is not considered a "standard" according to the PCB Spill Cleanup Policy (40 CFR 761 Subpart G) or an Applicable or Relevant and Appropriate Requirement (ARAR) at the Pinette's site. In fact, the spill policy states that "... The policy applies to spills which occur after May 4, 1987," and "... spills which occurred before the effective date of this policy are to be decontaminated to requirements established at the discretion of EPA, usually through the regional offices." Furthermore, it should be noted that the PCB Spill Cleanup Policy states that in addition to decontaminating soil to 10 ppm PCBs by weight, a minimum depth of 10 inches be excavated and replaced with clean soil, i.e., containing less than 1 ppm PCBs.

Additionally, in response to this comment, the 5 ppm PCB target soil cleanup level selected specifically for the Pinette's site corresponds to a total lifetime excess cancer risk of 8x10-6. In comparison, the TSCA level referenced here by the Air Force of 10 ppm PCBs would result in a 2x10-5 lifetime excess cancer risk or an incremental increase in risk of 2.5 times that at 5 ppm for the protection of public health at this site. (Refer to Attachment C of the ROD which identifies the exposure assumptions used to develop these risk calculations).

In response to the remainder of the Air Force's comment, the 5 ppm target cleanup level for PCBs in soil also involves excavation of approximately 1600 cubic yards while a 10 ppm cleanup level would involve the excavation of approximately 1200 cubic yards. This increase of approximately 400 cubic yards results in a corresponding increase of approximately $200,000 total capital cost for the source control portion of the overall remedial action.

Comment 2. The Air Force remarked that it is unlikely that the aquifer can be used as a drinking water source, particularly since EPA admits it would be technically impracticable to remove particulate-bound PCBs from groundwater at the site. The Air Force noted that the risk assessment identifies direct contact with PCB-contaminated soil by humans and wildlife as the major hazard associated with the site and stated that capping the site with clean fill material would prevent casual contact with PCB-contaminated soil. The Air Force asked that EPA respond to these concerns before implementing the proposed remedy for the Pinette's site.

EPA's Response: Under Section 121 of CERCLA, the EPA must comply with the Applicable or Relevant and Appropriate Requirements (ARARs) under both Federal and State laws in selecting a remedy for a site. For the Pinette's site, these ARARs require EPA (in consultation with the DEP) to treat the aquifers as potential sources of drinking water. Removal and eventual treatment of the other groundwater contaminants at the Pinette's Salvage Yard site is vitally important because they migrate faster than do PCBs, and may contaminate currently unaffected downstream areas (thereby extending the existing bounds of the plume of contamination). Removal of the other organics would also prevent off-site migration of the PCBs, because their presence would increase the mobility of the PCBs in the groundwater. Furthermore, the capping alternative suggested by the Air Force would seriously limit all potential future uses of the site and would not meet Congress' mandated preference under CERCLA for treatment to the maximum extent practicable. In addition, the capping alternative would not fully protect the groundwater from the source of contamination which currently exists at levels above federal and state safe drinking water standards.

Comment 3. The Air Force recommends a site remedy that consists of achieving a PCB cleanup level of 10 ppm to conform with the TSCA residential standard; removal and incineration of contaminated soils as described in the Proposed Plan; covering the excavated area with clean fill material; and, fencing the site.

EPA's Response: The remedy recommended by the Air Force would not be protective of human health and the environment. Without a groundwater remedy, the Air Force's recommendation would not be protective of human health because it would not address the contamination present in the on-site groundwater and the likelihood of future off-site contamination through migration. In addition, EPA's evaluation of environmental risks at the site indicates that a soil cleanup level of 10 ppm PCBs would not be protective of the environment. Finally, the PCB Spill Cleanup Policy, which is the basis of the Air Force's recommended, alternative cleanup level, requires excavation of the top ten inches of all contaminated soil (not just that contaminated over 10 ppm) and the placement of clean soil over the excavated areas.

Comment 4. The Air Force asked how did EPA develop the soil and groundwater cleanup levels, especially for PCBs.

EPA's Response: This comment has been addressed in detail in Sections X and XI of the ROD and through EPA's responses contained herein to PRP Comment 1, PRP Comment 3 and State of Maine Comment 1 under B. Draft Final FS.

Comment 5. The Air Force asked how the proposed remedy balances cost-effectiveness and protection of the environment.

EPA's Response: Section 121 of CERCLA, as amended by SARA, requires EPA to select a remedy that is both cost-effective and protective of human health and the environment. EPA selected target cleanup levels that would ensure protectiveness of human health and the environment. EPA then analyzed a number of remedial alternatives for their ability to meet these target levels, as well as for their ability to meet other statutory requirements and preferences contained in CERCLA Section 121. (See Sections VIII through XI of the ROD). Of the alternatives which met these criteria, EPA selected a remedy which would be cost-effective. A full discussion of the protectiveness and cost-effectiveness of the proposed remedy is contained in Section XI of the ROD.

Comment 6. The Air Force asked to what extent the proposed site remedy would involve readdressing the same area that was cleaned up by EPA's 1983 removal action.

EPA's Response: In 1983, EPA removed approximately 1,050 tons of PCB-contaminated soils and debris from the spill area. At that time, EPA targeted for removal only those soils contaminated with more than 50 ppm PCBs. EPA undertook this removal action to address an imminent and substantial danger to the public health and welfare. By contrast, the current remedial action seeks to ensure the long-term protection of human health and the environment, taking into account all site contaminants (rather than just PCBs) and both soil and groundwater contamination. Thus, the proposed remedy will address not only the PCB contamination remaining in the spill area following the 1983 removal action, but also the entire range of problems posed by contamination in all parts of the site. Furthermore, whereas the removal action simply abated an immediate threat, the proposed remedy will ensure the protection of human health and the environment in accordance with the cleanup standards and requirements of Section 121 of CERCLA.

IV. SUMMARY OF CONCERNS RAISED BY A LOCAL OFFICIAL DURING THE FORMAL COMMENT PERIOD AND INFORMAL QUESTION AND ANSWER PERIOD OF THE APRIL 11, 1989 PUBLIC HEARING AND EPA RESPONSES TO THESE COMMENTS

The following section summarizes questions asked by a local official after the close of the portion of the April 11, 1989 public hearing devoted to accepting formal public comment. EPA is responding to these informal questions in this document to address issues of concern to the community that were not raised as part of the formal public comment process.

Comment 1. A local official stated his concurrence with the State of Maine's comment that an institutional control on use of the site should be instituted following complete remediation of the site.

EPA's Response: Please refer to EPA's response to the State of Maine Comment 2 under A. Comments on the Proposed Plan.

Comment 2. One local official remarked that the time required for remediation seemed somewhat long.

EPA's Response: The 3-5 year time frame stated in the Proposed Plan for completion of the overall site remedial action is based upon several assumptions which include not only the design engineering of the remedy, but also the administrative requirements that EPA is required to satisfy. These administrative requirements include, for example, procurements for soliciting contractors capable of carrying out the remedy, access to the property to undertake the remedy, and the necessary permits involved (if any) in implementing the remedy. EPA anticipates that these administrative hurdles will be addressed within the next year so as to begin the remedial action during the Summer of 1991 (the next construction season in the Washburn, Maine area).

Comment 3. One local official expressed his support and commendation for both EPA's and DEP's efforts at the Pinette's Salvage Yard site.

EPA's Response: EPA would like to express its appreciation for the efforts that this local official has provided to both agencies throughout the recent Remedial Investigation, Feasibility Study, and Record of Decision process.

Comment 4. A local official requested a clarification regarding the need for a waiver for the groundwater at the site.

EPA's Response: The waiver being recommended for the Pinette's site groundwater is based upon the present determination that collection of particulate-bound PCBs will be technically impracticable from an engineering perspective. Therefore, compliance with the State of Maine's Maximum Exposure Guideline (MEG) for PCBs of 0.5 parts per billion (ppb) would require a waiver. This waiver would involve the use of an institutional control (e.g., deed restriction) to prevent consumption of or other contact with the PCB-contaminated groundwater at the site so that it would not pose a threat to the public health or environment. However, EPA has determined that the groundwater at the site will be treated to meet the Applicable or Relevant and Appropriate Requirements (ARARs) for all other contaminants in the groundwater that exceed their respective Federal and/or State ARARs. This is required since several of these other organic contaminants are more mobile than PCBs and therefore may potentially mobilize the current particulate-bound PCBs. It is also required because several of these organics are classified as more carcinogenic than PCBs. This, however, will not preclude the treatment of the PCBs in the groundwater at the site to the maximum extent practicable and/or technically feasible in an attempt to achieve the ARAR for PCBs.

ATTACHMENT A

COMMUNITY RELATIONS ACTIVITIES AT THE PINETTE'S SALVAGE YARD SITE WASHBURN, MAINE

The community relations activities conducted by EPA at the Pinette's Salvage Yard site during the recent remedial activities are listed below:

- September 1987 - EPA released a fact sheet to inform the public about the preliminary findings of the Deletion Remedial Investigation (RI) conducted during August 1985-1986.
- September 24-25, 1987 - EPA met with residents and local officials in Washburn to learn about citizens' concerns regarding the Pinette's Salvage Yard site.
- November 1987 - EPA issued an Information Sheet announcing the availability of the Final Field Investigation Report.
- June 1988 - EPA prepared a revised Community Relations Plan to provide an update of community concerns, and community relations and remedial activities.
- June 1988 - EPA issued a Fact Sheet describing the Phase II Field Investigation at the Pinette's Salvage Yard Site.
- June 29, 1988 - EPA held an Availability Meeting to address citizens' concerns.
- March 1989 - EPA issued a public notice to announce the time and place of the Feasibility Study (FS) public informational meeting for the site and to invite public comment on the FS and Proposed Plan.
- March 1989 - EPA mailed the Proposed Plan announcing EPA's preferred alternative for addressing contamination at the site to all those on the site mailing list.
- March 6, 1989 - EPA issued a press release to announce the public meeting announcing the preliminary recommendation of a cleanup alternative for the Pinette's Salvage Yard site.
- March 14, 1989 - EPA held a public informational meeting

to discuss the results of the FS and the Proposed Plan.

- April 11, 1989 - EPA held an informal public hearing to accept comments on the remedial alternatives evaluated in the FS and Proposed Plan.

- March 15 - April 14, 1989 - EPA conducted a public comment period to receive comments on the FS, Supplemental RI and Proposed Plan.

ATTACHMENT B

COMPLETE TEXT OF STATE OF MAINE COMMENTS

STATE OF MAINE

Department of Environmental Protection

MAIN OFFICE: RAY BUILDING, HOSPITAL STREET, AUGUSTA
MAIL ADDRESS: State House Station 17, Augusta, 04333
207-289-7688

JOHN R. McKERNAN, JR.
GOVERNOR

DEAN C. MARRIOTT
COMMISSIONER

April 11, 1989

Mr. Michael Jasinski
Remedial Project Manager
U. S. Environmental Protection Agency
Waste Management Division (HPS-CAN1)
J. F. K. Federal Building
Boston, Massachusetts 02203

RECEIVED
APR 11 89
ME & VT WASTE
MANAGEMENT BRANCH

Dear Mr. Jasinski:

The Maine Department of Environmental Protection (DEP) wishes to thank the U. S. Environmental Protection Agency for the opportunity to comment on the Proposed Plan for the Pinette's Salvage Yard Superfund Site in Washburn, Maine.

The DEP has reviewed the proposed plan and the Remedial Investigation and Feasibility Study and offers the following comments and suggestions.

Sincerely,

Dean C. Marriott
COMMISSIONER

DCM/eg

cc: A. Prysunka

TESTIMONY OF DEAN C. MARRIOTT
COMMISSIONER, DEPARTMENT OF ENVIRONMENTAL PROTECTION
ON EPA'S PROPOSED PLAN FOR THE PINETTE'S SALVAGE YARD SITE

MY NAME IS REBECCA HEWETT. I AM AN EMPLOYEE OF THE MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION AND THE SITE MANAGER FOR THE PINETTE'S SALVAGE YARD SITE. I WILL BE PRESENTING THE TESTIMONY OF DEAN C. MARRIOTT, COMMISSIONER OF THE DEPARTMENT OF ENVIRONMENTAL PROTECTION, ON BEHALF OF THE MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION CONCERNING EPA'S PROPOSED PLAN FOR REMEDIATION OF THE PINETTE'S SITE.

THE MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION (DEP) HAS REVIEWED THE SUPPLEMENTAL REMEDIAL INVESTIGATION AND FEASIBILITY STUDY FOR THE PINETTE'S SALVAGE YARD SUPERFUND SITE AND OFFERS THE FOLLOWING COMMENTS ON THE U.S. ENVIRONMENTAL PROTECTION AGENCY'S (EPA) PROPOSED PLAN FOR SITE REMEDIATION, WHICH INCLUDES BOTH MANAGEMENT OF MIGRATION (MM) FOR GROUNDWATER AND SOURCE CONTROL (SC) ALTERNATIVES.

MANAGEMENT OF MIGRATION (GROUNDWATER) ALTERNATIVES:

THE DEP CONCURS WITH THE MANAGEMENT OF MIGRATION (MM) REMEDY #3: EXPEDITED GROUNDWATER COLLECTION AND TREATMENT, AS PROPOSED BY EPA. THE DEP UNDERSTANDS THAT MM #3 WILL EXTRACT CONTAMINATED GROUNDWATER, TREAT THE GROUNDWATER TO COMPLY WITH FEDERAL AND STATE ARARS (APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS) AND REINJECT THE TREATED GROUNDWATER INTO THE GROUND. IF, FOLLOWING IMPLEMENTATION OF THE GROUNDWATER REMEDY, IT IS DOCUMENTED AND DETERMINED THAT THE PCB-GROUNDWATER ARAR ESTABLISHED BY THE STATE OF MAINE (0.5 PPB) IS NOT BEING MET AS A RESULT OF SUSPENDED/COLLODIAL PARTICULATE BOUND PCBS, THEN AN INSTITUTIONAL CONTROL MUST BE ESTABLISHED FOR THE SITE THAT PROHIBITS THE CONSTRUCTION AND USE OF ANY AND ALL GROUNDWATER WELLS WITHIN THE SITE AREA.

IN REGARDS TO THE CONTAMINANT (TETRACHLOROETHYLENE) DETECTED IN ONE (1) RESIDENTIAL WELL NEAR THE SITE DURING THE PHASE II FIELD WORK BUT NOT IN A SUBSEQUENT SAMPLE COLLECTED AND ANALYZED IN JANUARY 1989, CONSEQUENTLY, IT WAS NOT ADDRESSED IN THIS SITE REMEDY, AS PROPOSED. THE STATE OF MAINE FEELS THAT THIS WELL AND THE OTHER RESIDENTIAL WELLS NEAR THE SITE MUST BE INCLUDED IN THE ASSESSMENT OF THE SITE THAT WILL BE PERFORMED WITHIN FIVE (5) YEARS FOLLOWING THE COMPLETION OF THE SITE REMEDIATION (SC AND MM) TO BE CERTAIN THAT ALL GROUNDWATER CONTAMINATION FROM THIS SITE HAS BEEN FULLY REMEDIATED.

SOURCE CONTROL ALTERNATIVES

THE DEP CONCURS WITH THE COMBINATION OF SOURCE CONTROL (SC) REMEDIES #4: INCINERATION (OFF-SITE) AND #5: ON-SITE SOLVENT EXTRACTION, AS PROPOSED BY EPA. AS PRESENTED, THE DEP UNDERSTANDS THAT THE SC REMEDY WILL CONSIST OF THE FOLLOWING:

A. OFF-SITE INCINERATION OF PCB-CONTAMINATED SOILS GREATER THAN 50 PARTS PER MILLION (PPM);

B. ON-SITE SOLVENT EXTRACTION OF SOILS CONTAMINATION WITH PCBS BETWEEN 5-50 PPM AND ORGANIC CHEMICALS (BENZENE, CHLOROBENZENE, AND OTHERS);

NOTE: IT IS ESTIMATED THAT THE REMOVAL OF THE SOILS DESCRIBED IN A. AND B. ABOVE WILL RESULT IN THE EXCAVATION OF APPROXIMATELY 2,200 CUBIC YARDS.

C. PCB-CONTAMINATED SOILS GREATER THAN 1 PPM AND LESS THAN 5 PPM WILL BE EXCAVATED TO A MINIMUM DEPTH OF TEN (10) INCHES AND PLACED IN THE EXCAVATIONS RESULTING FROM THE REMOVAL OF SOIL DESCRIBED IN A. AND B. ABOVE.

D. THE SOILS TREATED ON-SITE BY SOLVENT EXTRACTION THAT ARE DETERMINED TO BE FULLY TREATED (I.E. MEETS CLEAN UP STANDARDS FOR PCB'S AND ORGANICS) WILL BE PLACED IN THE EXCAVATIONS OVER THE SOILS DESCRIBED IN C. ABOVE.

E. ALL SITE AREAS EXCAVATED BECAUSE THEY CONTAIN GREATER THAN 1 PPM AND LESS THAN 5 PPM PCB CONTAMINATION WILL BE COVERED WITH SOIL CONTAINING LESS THAN 1 PPM PCBS AND REVEGETATED.

THE DEP ADVOCATES THAT AN INSTITUTIONAL CONTROL MUST BE PLACED ON THE SITE THAT PROHIBITS ANY AND ALL EXCAVATED AREAS FROM BEING DISTURBED FOR ANY REASON (I.E. GRAZING, FARMING, HOUSE FOUNDATION, ETC.) WITHOUT THE PRIOR WRITTEN APPROVAL OF THE DEP'S COMMISSIONER. THE REASON FOR THIS INSTITUTIONAL CONTROL IS TO PROHIBIT ANY AND ALL DISTURBANCE OF THE CLEAN SOIL LAYER WHICH ACTS AS A BUFFER TO PROTECT THE PUBLIC FROM EXPOSURE TO PCB-CONTAMINATED SOILS. IF THE BUFFER LAYER IS DISTURBED, PROTECTION OF PUBLIC HEALTH CAN NOT BE ASSURED.

FINALLY, THE DEP URGES THE EPA TO PURSUE ANY AND ALL POTENTIALLY RESPONSIBLE PARTIES (PRP'S), IMPARTICULARLY LORING AIR FORCE BASE (LORING) FROM WHOM THE TRANSFORMERS CONTAINING PCB OIL ARE BELIEVED TO HAVE ORIGINATED. THE STATE OF MAINE WILL BE EXPENDING TEN PERCENT OF THE REMEDIATION COSTS FOR THIS SITE BECAUSE RESPONSIBLE PARTIES ARE NOT TAKING RESPONSIBILITY FOR THEIR ACTIONS WHICH RESULTED IN THE SITE BECOMING CONTAMINATED.

DEAN C. MARRIOTT, COMMISSIONER

STATE OF MAINE

Department of Environmental Protection

MAIN OFFICE: RAY BUILDING, HOSPITAL STREET, AUGUSTA
MAIL ADDRESS: State House Station 17, Augusta, 04333
207-289-7688

JOHN R. McKERNAN, JR.
GOVERNOR

DEAN C. MARRIOTT
COMMISSIONER

RECEIVED
APR 25 89
ME & VT WASTE
MANAGEMENT BRANCH

April 14, 1989

Mr. Michael Jasinski
Regional Project Manager
U.S. Environmental Protection Agency
Waste Management Division (HPS-CAN1)
J.F.K. Federal Building
Boston, MA 02203-2211

RE: Review Comments (Draft Final RI/FS/PP dated March 1989) Pinette's Salvage Superfund Site in Washburn, Maine.

Dear ~~Mr. Jasinski~~ Mike:

The Maine Department of Environmental Protection (DEP) has reviewed the following documents for the Pinette's Salvage Yard Superfund Site in Washburn, Maine:

1. Final Supplemental Remedial Investigation and Public Health Evaluation Report (Volumes I,II, & III) dated March 1989,
2. Draft Final Feasibility Study Report (Volumes I & II) dated March 1989, and
3. EPA Proposes Cleanup Plan for the Pinette's Salvage Yard Superfund Site dated March 1989.

Review comments for each of the three (3) documents listed above are attached (Attachments I,II, and III).

If you have any questions please call me at (207)289-2651.

On behalf of the DEP, I thank you for the opportunity to actively participate in the decision making process for the remediation of the Pinette's Salvage Yard Site.

Sincerely,

Rebecca L. Hewett

REBECCA L. HEWETT
Division of Licensing & Enforcement
Bureau of Oil & Hazardous Materials Control

RLH:djp
bhjasinsk

Attachments

Attachment I

Maine Department of Environmental Protection (DEP) Review Comments on the Final Supplemental Remedial Investigation and Public Health Evaluation Report (SRI) (Volumes I,II, and III) dated March 1989.

The DEP submitted review comments to EPA on the Draft SRI (dated October 1988) in a letter dated December 7, 1988. The following comments from the December 7, 1988 letter were not addressed in the Final SRI dated March 1989:

A. General Comments # 3,4 and 6, and

B. Specific Comments # 11, 12, 21 and 24.

Of the Draft SRI Comments listed in A and B above, the following are important and must be addressed:

1. Specific Comment # 6 - A final definition of the Site which includes an areal description is important as we are nearing the Record of Decision (ROD) stage of the investigation and a specific Site definition is needed.

2. General Comments # 11 and 12 - The DEP maintains that in addition to the two (2) mechanisms described in the Final SRI to explain the presents of contaminants in the semi-confined till/bedrock aquifer, a third mechanism is possible and should be included. The shallow aluvial aquifer and the semi-confined till/bedrock aquifer are at least minimially connected hydraulically and that the continuous clay layer which separates the two (2) aquifers acts as a partially effective barrier.

The remaining comments pertain directly to the Final SRI.

3. Explain in more detail the source of the acetone contamination that is present in the drainage swale Northwest of the culvert (near Rita Pinette's residence).

4. Tables 3-11 and 3-12 - Amend the units for the inorganic analytical results to read mg/kg instead of ug/kg.

5. Table 6-1 - Amend the maximum detected concentration of lead in surface soils North of Gardiner Creek Road to read 103 mg/kg instead of 28 mg/kg.

6. Table 6-3 - Amend the maximum detected concentration of lead in surface soils South of Gardiner Creek Road to read 60 mg/kg instead of 53 mg/kg.

7. Page 219, Label the top of this page as "Table 6-9".

Attachment II

Maine Department of Environmental Protection (DEP) Review Comments on the Draft Final Feasibility Study (FS) Report (Volumes I and II) dated March 1989.

The DEP submitted review comments to EPA on the Draft FS (dated December 1988) in a letter dated January 27, 1989. Presently, DEP has concurred on EPA's proposed cleanup standards for the Site. However, the DEP does not agree with the risk assessment assumptions used as a basis to calculate current and future risks to human health and the environment presented in the Draft Final FS. The DEP, in its January 1989 comment letter (Comments # 1e, 1f, and 8) advocated the use of more conservative risk assessment assumptions and continues to recommend their use at this Site in assessing health and environmental risks.

Attachment III

Maine Department of Environmental Protection (DEP) review comments on the EPA Proposes Clean up Plan for the Pinette's Salvage Yard Superfund Site in Washburn, Maine dated March 1989.

1. Page 3, Site History, Paragraph 5, Sentence 2 - Add "in conjunction with the DEP" after EPA. The DEP has been and is presently involved with site activities and, therefore, our involvement should be stated.
2. Page 4, Paragraph 4, Sentence 1 - Same as comment 1 above.
3. Page 4, Paragraph 5, Bullet 1 - As previously stated in DEP's comment letter on the Draft Proposed Plan (PP) dated February 16, 1989 (Comment #9), the *DEP* believes that the shallow and deep overburden aquifers are at least minimally connected.
4. Page 5, Residential Well Water, Paragraph 2, Sentence 2 - The "Subsequent sampling of this well" occurred in January 1989 not December 1988.
5. Page 17, Paragraph 1, Sentence 2 - As stated in Comment #24 of the DEP's Draft PP comment letter dated February 16, 1989, add "on-site" before Solvent extraction to clarify that it will not be performed off-site as the incineration will.
6. Pages 18-20, Glossary - Ensure that the items defined in the Glossary are in bold print in the text and vice versa (i.e. "Hydrogeologic" and "Upgradient" are in bold type within the text [Page 4] but not defined in the Glossary while "Institutional Controls" and "Solvents" are defined in the Glossary but not in bold type in the text).

STATE OF MAINE

Department of Environmental Protection

MAIN OFFICE: RAY BUILDING, HOSPITAL STREET, AUGUSTA
MAIL ADDRESS: State House Station 17, Augusta, 04333
207-289-7688

JOHN R. McKERNAN, JR.
GOVERNOR

DEAN C. MARRIOTT
COMMISSIONER

April 14, 1989

RECEIVED
APR 25 89
ME & VT WASTE
MANAGEMENT BRANCH

Mr. Michael Jasinski
Regional Project Manager
U.S. Environmental Protection Agency
Waste Management Division (HPS-CAN1)
J.F.K. Building
Boston, MA 02203-2211

RE: Addendum to Pinette's Salvage Yard Superfund Site Testimony Dated April 11, 1989.

Dear ~~Mr Jasinski~~ Mike

As David Boulter, Maine Department of Environmental Protection (DEP) and David Webster, U.S. Environmental Protection Agency (EPA) discussed at the Pinette's Salvage Yard Superfund Site Public Hearing on April 11, 1989, the DEP understands that during the Management of Migration (groundwater) remediation

1. The groundwater will be treated for both PCB's and organics.
2. Separate technologies may be required to treat both PCB's and organics.
3. It may not be technically feasible to meet the State of Maine ARAR for PCB's (0.5 ppb) in groundwater.
4. The groundwater will be treated for PCB's to the degree that is technically practical.

If you have any questions call me at (207)289-2651.

Sincerely,

Rebecca L Hewett

REBECCA L. HEWETT
Division of Licensing & Enforcement
Bureau of Oil & Hazardous Materials Control

RLH:djp
bhjasinsk

cc: Dean C. Marriott, DEP

ATTACHMENT C

COMPLETE TEXT OF PRP COMMENTS

DEPARTMENT OF THE AIR FORCE
REGIONAL CIVIL ENGINEER, EASTERN REGION (HQ AFESC)
77 FORSYTH STREET, S.W.
ATLANTA, GEORGIA 30335-6801

13 April 1989

Mr Michael R. Deland
Regional Administrator
U. S. EPA, Region I
JFK Federal Building (HPS-1)
Boston MA 02203-2211

Dear Mr Deland

I am writing on behalf of the U. S. Air Force in response to EPA's proposed cleanup plan for the Pinette's Salvage Yard Superfund Site. The Air Force believes the target cleanup level for PCBs (5 ppm for soil and groundwater) is too strict, especially when compared to established cleanup standards. Under the requirements of the Toxic Substances Control Act (TSCA), PCBs in residential/commercial areas must meet a cleanup standard of 10 ppm. The TSCA policy also requires the excavated area to be capped with a minimum of 10 inches of clean material (less than 1 ppm PCB). The policy further states that EPA believes the level of risk posed by a PCB level of 25 ppm in the soil at an industrial/restricted access facility would not present significant risks either to the typical worker or to the general public.

EPA admits that it is technically impracticable to remove particulate-bound PCBs from groundwater at the site. It therefore seems unlikely that the aquifer can be used as a drinking water source. Further, the risk assessment identifies direct contact with PCB contaminated soil by humans and wildlife as the major hazard associated with this site. Capping the site with clean fill material would prevent casual contact with PCB contaminated soil. In view of our concerns, we ask that EPA respond to the attached questions before implementing the proposed remedy for the Pinette's site.

We recommend a site remedy that consists of the following: adopt a PCB cleanup level of 10 ppm to conform with the TSCA residential standard, remove and incinerate contaminated soils as proposed in the plan, cover the excavated area with clean fill material, and fence the site. This approach would prevent human or wildlife contact with PCB contaminated soil and provide a long term remedy that is both environmentally sound and cost effective. Our point of contact for the Pinette's site is Mr Ron Joyner, 404-331-6776.

Sincerely

Charles R Smith
CHARLES R. SMITH
Regional Civil Engineer

1 Atch
Questions

cc: HQ USAF/LEEV/JACE
HQ SAC/DEVC
42 CSG/DE/JA

APR 19
REGION I

QUESTIONS ON PINETTE'S SALVAGE YARD SUPERFUND SITE

1. How did EPA develop the soil and groundwater cleanup levels, especially for PCBs, for the Pinette's site?

2. What additional level of protection for human health and the environment will be achieved by the proposed PCB cleanup level of 5 ppm, as compared with the TSCA residential standard of 10 ppm?

3. How much additional soil will have to be removed to meet the PCB level of 5 ppm instead of the TSCA standard of 10 ppm? What additional costs will be incurred?

4. How does the proposed remedy balance cost effectiveness and protection of the environment?

5. To what extent will the proposed site remedy involve readdressing the same area that was cleaned up by EPA's 1983 removal action?

ATTACHMENT D

COMPLETE TEXT OF THE PUBLIC HEARING TRANSCRIPT

STATE OF MAINE TOWN OF WASHBURN

AROOSTOOK, ss.

PUBLIC HEARING

EPA PROPOSES: CLEANUP PLAN FOR THE PINETTE'S SALVAGE YARD SUPERFUND SITE

Taken before Lee H. Wyman, a Notary Public in and for the State of Maine on the 11th day of April, 1989 at the Washburn Municipal Building, Washburn, Maine commencing at approximately 7:15 P.M. pursuant to notice given.

AROOSTOOK LEGAL REPORTERS
P. O. BOX 1287
CARIBOU, MAINE 04736
207-498-2729

Reproduced from best available copy.

TABLE OF CONTENTS

DAVID WEBSTER	3
MICHAEL JASINSKI	7
REBECCA HEWETT	13
SHELDON RICHARDSON	17
DAVID BOULTER	18

PINETTE'S SALVAGE YARD - WASHBURN, MAINE

April 11, 1989

DAVID WEBSTER: We'll start the meeting now. Good evening. My name is David Webster. I'm here from the United States Environmental Protection Agency, Region I, in Boston, Massachusetts. My current position with EPA is Section Chief for the Maine and Vermont Superfund Section of the Waste Management Division.

My responsibilities include managing, implementation of the remedial Superfund Program in the State of Maine. I will serve as chairman of the meeting tonight and I want to welcome you all here.

The purpose of tonight's hearing is to formally accept your comments on the remedial investigation, risk assessment, feasibility study and proposed plan for remediation at the Pinette Salvage Yard, Superfund Site, located here in Washburn, Maine. EPA will also accept your comments on a waiver regarding the extent of ground water remedy which we will be describing tonight.

Also present here today are several people from

EPA staff and also from the Maine Department of Environmental Protection. Seated to my left is Michael Jasinski who is the site remedial project manager for the United States Environmental Protection Agency. Here from the Maine Department of Environmental Protection are David Boulter(Sic), the director of licensing and enforcement and Rebecca Hewett, site manager from the State of Maine.

Before I begin the formal part of this evening's procedure, I'd like to describe to you the format for his hearing. Essentially the evening will be structured into four parts. First, Mike Jasinski will give you a brief overview of the proposed plan. As many of you may know, EPA representatives made a detailed presentation of the plan at an informational meeting which was held here on March 14th. Following Mike's overview, Rebecca Hewett will make a statement on behalf of the State of Maine for the record and then after these opening statements, we will open up the hearing to any other oral comments that those of you in the audience may want to make for the record. Those of you do want to comment should indicate your desire to do so at that time. At that time I will ask you to identify yourself. Also if you have not seen them yet, we have made available for you copies of the proposed plan for the site on the table at the front of the room. Once I've called you to make a comment, if you would step forward to the podium, we'd appreciate it. So that everyone can have a chance to speak who might want to, I will reserve the right to limit the oral comment to ten minutes. This may not be a problem but if it looks like we're running particularly late, I may have to impose that restriction. In that case, I ask you to summarize the most important points you wish to make this evening and provide EPA with a copy of the full text of your comments. The entire text will be transcribed and become a part of the hearing record. After you've made your comments, I or another member of this panel may ask you some clarifying questions just to assist us in considering your statements. After all of the comments have been heard, I will close the formal part of this hearing. Just to remind you, the purpose of tonight's hearing is for EPA to receive your comments. As part of the formal hearing, we will not be able to respond tonight to your comments or questions. However, after I close the formal part of the hearing, we will remain available informally to answer any questions you have on issues raised this evening or on other aspects of the feasibility study of proposed plan. As you may already know, the public comment period for the proposed plan opened on March 15th and runs through April 14th. If you wish to submit written comments, I encourage you to do so. They must be postmarked no later than April 14th and mailed to our office in Boston. The appropriate address for our office can be found on page two of the proposed plan. At the conclusion of the meeting tonight, please see one of us from EPA if you have questions on the process for making written comments. Any oral comments we receive tonight and those we receive in writing during the comment period will be responded to in a document we call the Response and the Summary. This summary will be included with the decision document or record of decision that EPA prepares at the conclusion of the comment period. In the record of decision, EPA will explain which clean up alternatives have been selected for the Pinette Salvage Yard site. I know I've presented a lot of information to you, are there any questions on the format for this evening or anything else I've said on the procedures? If not, I again want to encourage each of you wishing to comment to do so tonight orally or in writing to EPA before April 14th. At this point, I'd like to turn it over to Mike Jasinski who will open with a brief overview of the proposed plan for the Pinette site. Mike.

MICHAEL JASINSKI: Thank you, Dave. I'd like for those of you who have a copy of the proposed plan to turn to pages eight through ten which basically outlines EPA's preferred alternative to the Pinette Salvage Yard site.

Essentially EPA has preliminarily proposed in this plan a comprehensive three part clean up remedy for the site to include soil and ground water contamination. Referred alternative combines two source control alternatives designed to address the soil contamination and a ground water alternative designed to address the migration of ground water contamination at the site. As page eight of the proposed plan outlines, the first key component of the source control remedy involves off site incineration of PCB contaminated soils greater than fifty parts per million and on site solvent extraction of PCB and other organic chemicals present at the site.

Essentially this source control alternative is broken down into several minor components. First of all, EPA proposes to address the soil and to the extent practicable the ground water contamination at the site by excavating approximately twenty-two hundred cubic yards of contaminated soil.

Those soils that are found to contain PCB's greater than fifty parts per million will be transported off site to a location where an incineration facility is available. Those are similar to those possibly in Texas and Illinois, for example. Those soils that contain between five parts per million and fifty parts per million PCB's and any other soils contaminated with organics such as benzene and chlorobenzenes will undergo solvent extraction.

This is an innovative technology which

essentially involves the extraction of organics from the solid or soil into a liquid form for eventual treatment in a liquid incineration similar to the fifty part per million soil that will be burned also.

Another component of the source control remedy would be to evaluate the soils that remain from the solvent extraction process on a continuous basis before and after treatment to ensure that our clean up criteria are met. PCB's, as I mentioned, that are extracted and any of the organics that are also extracted from those soils will be taken to an off site facility for incineration. Any soils from the solvent extraction process that are treated through our clean up goals that we have established on page five of the proposed plan which mainly is for the PCB's at five parts per million, will be treated and assuming that all soils are non-hazardous will be put --and consolidated back in the excavated areas from which we took the twenty-two hundred cubic yards out of the site. Additionally we are also proposing to excavate those PCB soils that contain one and less than five parts per million, approximately five hundred cubic yards, to a minimum depth of ten inches and consolidate those soils in the same excavation from which the twenty-two hundred cubic yards were originally taken. That will undergo the solvent extraction and incineration off site.

Finally, EPA would restrict access to the site using fences and warning signs during the remediation and treatment process. We are going to require that some of the junk vehicles that hinder any of the site remediation at the Pinette Salvage Yard are removed. We will recommend establishing institutional controls to monitor the site for any future releases from any vehicles or any salvage equipment at the site. And we will monitor surface water and sediments on a continuous basis for the first couple of months of the process. That essentially outlines the source control component of the overall site remedy.

The ground water portion of the remedy involves ground water collection using a multiple component system; that is the installation of shallow interceptor trenches and the installation of deep ground water extraction wells for the collection of the contaminated ground water within the site proper. That collected ground water would be pumped to granular filters for pretreatment and screening and eventually sent through the primary treatment system which is carbon absorption which uses activated carbon to remove the organics that we are intending on remediating in the ground water such as the benzene and chlorobenzenes. All the treated ground water that meet our initial goals of State of Maine criteria as well as federal maximum contaminant levels will be reintroduced into the shallow aquifer through recharge trenches on the site proper.

A part of the ground water remedy involves institutional controls on the site ground water during our remediation. That is, a ban on -- prohibiting the use of the on site ground water for drinking water purposes during clean up and if necessary, recommending the installation of either filtration units on any new residential wells in place on the site or a complete ground water prohibition. One key component of the ground water remedy involves a waiver which we have during this proposed plan process have been offering for public comment. The waiver essentially is a waiver from a State of Maine regulation. The regulation is for PCB's and ground water. We are going during this process of the proposed plan for public comment because at this stage due to technical and practibility reasons of extracting the PCB's in ground water we are looking for a waiver from the State of Maine PCB Standard and therefore in accordance with our laws, EPA is providing the public the opportunity to comment on that waiver during the remaining public comment period process. The overall remedy as it's broken down in the proposed plan on pages eight through ten essentially involve a total cost of about 4.45 million dollars of which three and a half million dollars is devoted to the source control component of the overall remedy and approximately $950,000.00 total present worth devoted to the ground water component of the overall remedy. Estimated time for design, construction and start up is estimated on the order of two to five years. Thank you.

DAVID WEBSTER: Thank you, Mike. At this time before we take other comments, I'd like to ask Rebecca Hewett from Maine DEP to make a presentation on behalf of the State.

REBECCA HEWETT: I'm presenting testimony of Dean C. Marriott, Commissioner, Department of Environmental Protection on EPA's proposed plan for the Pinette Salvage Yard.

My name is Rebecca Hewett. I am an employee of the Maine Department of Environmental Protection and the site manager for the Pinette's Salvage Yard site. I will be presenting the testimony of Dean C. Marriott, Commissioner of the Department of Environmental Protection, on behalf of the Maine Department of Environmental Protection concerning EPA's proposed plan for remediation of the Pinette's Salvage Yard site.

"The Maine Department of Environmental Protection, (DEP), has reviewed the supplemental remedial investigation and feasibility study for the Pinette's Salvage Yard Superfund Site and offers the following comments on the U. S. Environmental Protection Agency's, (EPA), proposed plan for site remediation, which includes both management of migration for groundwater and source control alternatives.

Management of migration (groundwater)alternatives: the DEP concurs with the management of migration, (MM), remedy number three. Expedited groundwater collection and treatment, as proposed by EPA. The DEP understands that management of migration number three will extract contaminated groundwater, treat the groundwater to comply with federal and state ARARS, applicable or relevant and appropriate requirements, and reinject the treated groundwater into the ground. If, following implementation of the groundwater remedy, it is documented and determined that the PCB groundwater ARAR established by the State of Maine, five parts per billion, is not met as a result of suspended/ collodiall particulate bound PCB's, then an institutional control must be established for the site that prohibits the construction and use of any and all groundwater wells within the site area.

In regards to the contaminants, trichloroethylene, detected in one residential well near the site during the phase 2 field work but not in subsequent samples collected and analyzed in January of 1989, consequently it was not addressed in this site remedy as proposed. The State of Maine feels that this well and the other residential wells near the site must be included in the assessment of the site that will be performed within five years following the completion of the site remediation, the source control and the management of migration, to be certain that all groundwater contamination from this site has been fully remediated.

Source control alternatives. The DEP concurs with the combination of source control remedies, number four, incineration off site and number five, on site solvent extraction as proposed by EPA. As presented, the DEP understands that the source control remedy will consist of the following:

A. Off site incineration of PCB contaminated soils greater than 50 parts per million.

B. On site solvent extraction of soils contamination with PCB's between five and fifty parts per million and organic chemicals such as benzene and chlorobenzene.

It is estimated that the soils described in A and B above will result in the excavation of approximately twenty-two hundred cubic yards.

C. PCB contaminated soils greater than one part per million and less than five parts per million will be excavated to a minimum depth of ten inches and placed in the excavations resulting from the removal of soils described in A and B above.

D. The soils treated on site by solvent extraction that are determined to be fully treated, i. e., they meet clean up standards for PCB's and organics, will be placed in the excavations over the soils described in C above.

E. All site areas excavated because they contain greater than one part per million and less than five parts per million PCB contamination will be covered with soil containing less than one part per million PCB's and revegetated.

The DEP advocates that an institutional control must be placed on the site that prohibits any and all excavated areas from being disturbed for any reason such as grazing, farming, house foundations, et cetera, without prior written approval from the DEP's Commissioner.

The reason for this institutional control is to prohibit any and all disturbances of the clean soil layer which acts as a buffer to protect the public from exposure to PCB contaminated soils. If the buffer layer is disturbed, protection of public health cannot be assured.

Finally, the DEP urges the EPA to pursue any and all potentially responsible parties and particularly Loring Air Force Base from whom the transformers containing PCB oils are believed to have originated. The State of Maine will be expending ten percent of the remediation costs for this site because responsible parties are not taking responsibility for their actions which resulted in the site becoming contaminated. Dean C. Marriott."

DAVID WEBSTER: Thank you. We will now take any comments which you may have regarding the proposed plan or the studies on the site. Sheldon Richardson. Maybe you can introduce yourself.

SHELDON RICHARDSON: Yes. My name is Sheldon Richardson and I am the town manager of Washburn. After the preliminary hearing in March, the council routinely discussed the proposal, indicated as EPA's preferred method of clean up and we certainly concur with that. The council certainly has not heard the testimony of Dean C. Marriott tonight but I certainly would concur with that also in terms of the State of Maine issuing those kinds of restrictions; particularly as to the institutional control on the site after the work is done. Basically that's all I have to say. We certainly are pleased with the preferred method of clean up and satisfies, we believe, the needs of the State of Maine and this community.

DAVID WEBSTER: Thank you. Anybody else with to make a comment?

DAVID BOULTER: I'm David--if I could just have a point of clarification for the audience here and for the record. It's our understanding--first of all, David Boulter speaking from the State of Maine DEP. It's our understanding that EPA is requesting a waiver of the State ARAR with respect to PCB's and I wanted to make it clear that such a waiver does not mean that we will not be looking to treat PCB's, but the level of clean up may not be technically feasible such that we would actually meet the standard that's promulgated and

I just wanted clarification on that point from you, if that's accurate.

DAVID WEBSTER: I can take and respond to the comments after I close the formal part of the hearing and I'll be happy to to that in what looks like a very short amount of time, okay?

DAVID BOULTER: Okay.

DAVID WEBSTER: Are there any other comments submitted for the record? Otherwise, we'll close the formal part of the hearing and go into the clarification aspect. With that, I hereby declare the formal part of the hearing closed. As I indicated earlier, however, we will stand by for questions and comments you raised, informally at this time. If anybody wants to raise such issues, please feel free to do so. We'll try to respond. Let me try to--the waiver. Mike, do you want to explain the--it is--it's certainly the goal to clean up the PCB's but we feel there may be a technical barrier here.

MICHAEL JASINSKI: I think the issue is with what we have for knowledge for this site, we're not assured one hundred percent that we can attain that ARAR. Your ARAR of .5 PPB PCB's. That's not precluding us from treating the groundwater because we have deal with it for benzene and chlorobenzene which exceed not only your ARAR but our own federal standards for protection of public health. So there's two phases to that. We're going to treat the groundwater for two reasons. The (unintelligible word)organics in the groundwater as well as the PCB's. We're not assured, ourselves, we can get to the .5 level for PCB's. We feel confident we can contain the (Unintelligible word)organics. We're asking for the waiver up front basically because we may need to invoke that in the future because we can't attain the standard.

DAVID BOULTER: I just wanted a clarification. So it's clear that you will be treating for PCB's but the level that we may reach may be different from the standard, that's all I--.

MICHAEL JASINSKI: Let's say it comes down--.

SHELDON RICHARDSON: Okay, the levels that we're talking about, is that the levels being safe for drinking water?

MICHAEL JASINSKI: Yes.

SHELDON RICHARDSON: Okay. What is the federal standard?

MICHAEL JASINSKI: We don't have a standard. So we have to therefore comply to their standard which is--.

SHELDON RICHARDSON: Do all states have a standard now? Some may or may not.

DAVID BOULTER: A good many of the states do. The difficulty here, it looks like, the PCB's won't remove themselves from the soil so--.

MICHAEL JASINSKI: We may not be able to flush them out. That's what our problem is, in the groundwater, bedrock in the site proper.

SHELDON RICHARDSON: And that's the reason that--since that's not going to happen, that's another good reason for institutional control.

REBECCA HEWETT: That's right. That's correct.

MICHAEL JASINSKI: We hope if all works out fine, that we won't need an institutional control or a waiver and the groundwater will be drinkable, if--.

SHELDON RICHARDSON: What would your waiver be requesting, whatever you feel that's reasonable, that you cannot get?

MICHAEL JASINSKI:Well, under our regulations, we can go for six different types of waivers under the CIRCLA(SIC)law. Ones for--you know, you can provide better protection using an alternative treatment method, not attain that ARAR, and there's a list of them in the statute under clean up standards, section 121. This one is for technical and practibility from an engineering perspective, to extract the PCB's from groundwater.

REBECCA HEWETT: Because they're adhered to the soil.

DAVID WEBSTER: So

basically we're required by the statute to comply with all applicable or relevant appropriate federal standards or state standards. If we look at it and we say gee, I don't know if it's technically practicable to do it, that's one reason for saying I can't meet all of the requirements. I have to say in my remedy yes, it fulfills the law, I meet all the requirements. If there's a good reason why you can't such as technical impractibility or you choose not to, you can invoke the waiver but we want to make sure people are aware of it. I think one way of answering Dave's question is let's say there's two different types of treatment; one for the volatiles and one for the PCB's, we would be using both treatments. We are trying to get-- our goal is to reach the PCB's. The best technical information said they couldn't be stripped from the soil particles but we're going to try. If we can't, then we're going to need some kind of institutional controls prolonged for a longer duration or perhaps forever.

MICHAEL JASINSKI: And that's only, for clarification, within the boundaries of the salvage yard itself which is where the site is defined as the spill. Or pretty much. It's not anything north of --up towards some of the residential wells in the area. It's going to be a fairly localized control or otherwise it would possibly be invoked after we determine that we need to invoke a waiver or institutional control or otherwise.

SHELDON RICHARDSON: The time sequence seems a little bit long to me, three to five years for some of it. That pushes the process to what, fifteen years plus? That seems like a long time. Maybe it isn't. Maybe I'm just--.

MICHAEL JASINSKI: That could be the high side too, possibly, Sheldon. If all goes well, we could be designing the remedy within the next--within the fall or winter and then once we design the remedy, we've got to implement the remedy and then the coordination effort and the subcontracting efforts and once we do what we have to do for the--you know, it's got to be a stage process for one thing. First we've got to dig up the soils, we've got to figure out what amount is going to be over fifty we'll have to ship off site before we can start doing anything with the solvent extraction, let alone touch the groundwater. The first thing is to remediate the soils. So it's a phased thing.

DAVID WEBSTER: A lot of-- to be frank, are institutional administrative too. We have an enforcement, one, that DEP alluded to and we're not exactly sure where that's going to take us right now. And that could be protracted. Hopefully it won't be. When you get in to going into the remedy, there may be permits involved or exactly how these institutional controls get implemented and we may be back asking for your assistance at that point on a local level but often the results aren't necessarily the engineering reasons but administrative ones. Sometimes when the government agencies get involved with doing the work, there are procurements as far as seeing that all permits are in place beforehand. Sometimes there are bid protests. I think that we've learned a lot in the process and one is to not promise speedy turn arounds on something that have a lot of aspects beyond our best control.

SHELDON RICHARDSON: Well, not only that, I think a lot of times it takes the bureaucracy a long time to make a decision because you have to cover every single facet. If you don't, somebody is going to chew you out for that. Obviously that's just the way the American system works and it works that way from the local level all the way up through, believe me. If you make the wrong decision as part of a project, you're going to get really chewed out by somebody and no one likes that. So if we try to do it right, sometimes it does take longer.

MICHAEL JASINSKI: One key administrative one may be right away, getting access to that property. That may be a battle.

SHELDON RICHARDSON: That very well could be.

DAVID BOULTER: You expect that to be a factor, then?

MICHAEL JASINSKI: It could be a potential factor in doing the remedy, getting into the property. We have never obtained any written access to that property, only verbal access, to date.

REBECCA HEWETT: You tried to get that before.

MICHAEL JASINSKI: Now we're going to have to get it in writing before we start doing things.

DAVID BOULTER: We can help in that regard.

SHELDON RICHARDSON: Is there a process that the State can go through?

DAVID BOULTER: Yes.

DAVID WEBSTER: As well as EPA through the statute but it involves judges and federal marshals and things that are not--don't happen overnight.

SHELDON RICHARDSON: I just think you people have done--we have no qualms about what EPA or DEP has done. We get a little discouraged at times but other than that, I think the approach has been pretty darn good.

PINETTE'S SALVAGE YARD - WASHBURN, MAINE

DAVID WEBSTER: Any other comments, questions? So thank you and I'll close the informal part of the hearing as well.

END OF HEARING

C E R T I F I C A T I O N

I HEREBY CERTIFY THAT the foregoing is a true and correct transcript of the record of proceedings held on the afore-designated hearing date.

Lee H. Wyman, Reporter

ATTACHMENT E

EPA'S RESPONSES TO FINAL SUPPLEMENTAL RI COMMENTS

RESPONSES TO COMMENTS FROM STATE OF MAINE DEP
PINETTE'S SALVAGE FINAL SRI

1) **December 7, 1988 - General Comment No. 3 - Include in the appropriate sections (3.0, 4.0 and 5.0) of the report a routine description of the protocol and procedures used to obtain groundwater and soil samples.**

The Supplemental Remedial Investigation contains general methodologies for subsurface borings, geophysical investigations, well construction details, surface and subsurface sampling intervals. Because the Phase I and II Work Plans and Field Operation Plans provide substantial details on specific sampling methodologies, it was determined that such information would be superfluous in the SRI report. However, a general reference to the planning documents was inadvertently omitted from Section 1.4 of the report. Entries have been made on the SRI Errata Addendum to note these references.

2) **December 7, 1988 - General Comment No. 4 - Include in the appropriate sections (3.0, 4.0 and 5.0) of the report on explanation of the mechanism(s) for laboratory contamination of both soil and water samples with methylene chloride, acetone, etc.**

The specific mechanisms for potential laboratory or sampling - induced contamination of soil and water samples are conjectural. The text makes several references to these. In Section 3.3, Page 96, referring to soil analyses, ketones are noted as common laboratory chemicals introduced during field or laboratory decontamination procedures. Phthalates are noted to be potentially caused by use of plastic and rubber products during sampling or analysis. Methylene chloride was not addressed specifically on Page 96; an Errata Addendum entry has been made to note that methylene chloride is a common laboratory solvent which may have been introduced to samples by incomplete hardware decontamination or careless laboratory storage and housekeeping.

Errata Addendum entries for Section 4.8 have been noted to address trace levels of acetone and methylene chloride in groundwater samples and residential well samples.

An Errata Addendum entry has been made for Section 5.1.3 to address acetone detected in Phase I surface water samples and laboratory blanks.

In Section 5.2.2, Page 186, the occurrence of methylene chloride and acetone in sediment samples is addressed. An Errata Addendum entry has been noted to add a sentence to the fourth paragraph to address potential laboratory sources of methylene chloride. The occurrence of moderate levels of acetone in eastern drainage swale sediments is currently addressed in the Section 5.2.2 text on Page 186.

3) December 7, 1988 - General Comment No. 6 - Provide a final definition of the Site which includes an areal description. The DEP requests that in addition to the spill area, the Site includes other areas of known contamination regardless of the source.

Under Section 105 (a)(8)(B) of CERCLA, an NPL site is defined by the scope of a release or threatened release, not by precisely delineated boundaries. Further, the site includes not only the area where hazardous substances have been "deposited, stored, disposed of or placed," but also where any such substances have "otherwise come to be located." (See Section 101 (9) of CERCLA.) Accordingly, EPA has provided a description of the PSY site in the ROD (see page 1) which includes all areas of known contamination related to the release EPA and the State of Maine identified during the NPL listing process. To the extent that other, unrelated areas of contamination are discovered elsewhere in the site vicinity (e.g., the PCE detected in one sampling of Roger Pinette's well), the State may request that these be evaluated for future inclusion on the NPL.

4) December 7, 1988 - Specific Comment No. 11 - Page 104, Section 4.6, Bullet 1 - Re-evaluate and modify this conclusion. The unconfined alluvial aquifer and the semi-confined glacial till/fractured bedrock aquifer must be at least minimally connected since PCBs and chlorobenzenes have migrated into the lower aquifer system and a negative vertical gradient exists between the two aquifers.

- Specific Comment No. 12 - Page 104, Section 4.6, Bullet 2 - Re-evaluate and modify this conclusion. The clay confining unit is only a potentially effective barrier, since PCBs and chlorobenzenes have been detected in the lower aquifer.

April 14, 1989, Comment No. 2 - (Specific) comments No. 11 and 12 - The DEP maintains that in addition to the two (2) mechanisms described in the Final SRI to explain the presence of contaminants in the semi-confined till/bedrock aquifer, a third mechanism is possible and should be included. The shallow alluvial aquifer and the semi-confined till/bedrock aquifer are at least minimally connected hydraulically and the continuous clay layer which separates the two (2) aquifers acts as a partially effective barrier.

The comments were originally issued pertaining to conclusions included in the Draft SRI (October 1988) which stated: a) that the alluvial and glacial till/bedrock aquifers are not in hydraulic communication in the vicinity of the spill, and b) that the clay confining unit beneath the alluvial aquifer acts as an effective barrier to vertical migration of contaminants from the upper aquifer to the lower aquifer and as an aquitard causing "perched" conditions in the upper aquifer. Section 4.8 was revised significantly between the Draft and Final documents to address these concerns; however, further clarification is provided herein and in the SRI Errata Addendum.

The Final SRI addresses potential contaminant migration from the upper to lower aquifer on Pages 166-167. On page 166, paragraph six, the clay confining unit is described as "relatively impermeable". It should be noted that the clay confining unit is characterized as an "aquitard" and not as an "aquiclude" in recognition of the limited permeability of the unit.

Mechanisms for leakage through the clay confining unit are discussed on page 167, paragraph one and paragraph three. A primary mechanism for contaminant migration may have been breaching during the IRA excavation activities to the north of and within the spill area. Recharge to the lower aquifer in the approximate spill area, allowing potential contaminant transport, is proposed to be a result of several potential mechanisms; including thinning and possible stratigraphic discontinuity of the clay unit north of the spill area, leakage through the clay unit due to thinning or breaching at the IRA dewatering trench; and potential structural discontinuities in the clay unit.

The potential for contaminant migration by direct aqueous flow through the clay confining unit is limited by the low permeability and thickness of the unit. Although this transport mechanism is considered to be of limited significance relative to the alternative mechanisms discussed above, Maine DEP is correct in noting that this possibility should be addressed in the SRI text. Therefore, Errata Addendum entries have been prepared to modify language in paragraphs one and three of Page 167.

The assertion by Maine DEP that the upper and lower aquifers are "at least minimally connected hydraulically" is addressed by the aquitard/aquiclude distinction and the above-presented discussion. In addition, as discussed in paragraphs three and four of Page 167, south of the SMW/DMW-1 and -9 clusters, the clay unit thickens to become an effective aquitard as clearly evidenced by the distinct elevation differences of piezometric heads and downward vertical gradients between the two aquifers. Therefore, from a hydrologic standpoint, the "minimal hydraulic connection" between the upper and lower aquifers is considered to be insignificant in the areas south of the upgradient well clusters.

5) December 7, 1988 - Specific Comment No. 21 - Section 6.0 - Expand the dermal contact estimates for children to include exposure to legs along with hands and arms.

Upon consideration of the geographic location and climate of the Washburn area, EPA determined that the soil exposure scenario for children employed in the Public Health Evaluation involving exposure to hands and arms was appropriate, and determined that a revision of calculations of risks due to direct contact should not be performed. Instead, the SRI was modified to incorporate a semi-quantitative discussion (page 251, first paragraph) which noted that an assumption of leg exposure would increase the skin exposure area by a factor of two, thereby approximately doubling the calculated risk, but resulting in a similar order of magnitude, and therefore insignificant effect on the plausible maximum case risk.

6) December 7, 1988 - Specific Comment No. 24 - Page 149, Table G-9 - Add lead as a contaminant of concern in soils. Table 6-2 on Page 133 indicates that lead is present above background and regional background concentrations.

Analysis of lead analytical data from surface and subsurface soils indicated that concentrations were similar both north and south of Gardner Creek Road. If lead were a site-related contaminant, it would be expected that concentrations would be diluted with transport to the south, and hence, surface soil concentrations would be lower to the south than to the north. In addition, subsurface and surface lead concentrations were similar, suggesting no pattern of contamination or accumulation. Geometric mean concentrations of soil lead were all within regional and site-specific background levels. In consideration of several factors, it was concluded in the SRI that lead is not a site-related contaminant of concern in soils, as the weight of evidence suggests that it is present at naturally occurring levels.

7) April 14, 1989 - Final SRI Comment No., 3 - Explain in more detail the source of the acetone contamination that is present in the drainage swale northwest of the culvert (near Rita Pinette's residence).

As discussed in Section 5.2 of the SRI, acetone was detected in sediment samples at a frequency and range of concentration indicating a specific source of contamination to the drainage swale. Because no pattern of acetone contamination was detected in the Source Characterization field investigation, any discussion of a source for the acetone contamination is conjectural. As noted in Table 3-13 on page 100, acetone is used as a solvent for rubber, plastics, lacquers, varnishes, cement, paint removers, and storage of acetylene gas. Potential sources of contamination anticipated to be used in a facility such as the Pinette's Salvage Yard could be acetylene gas cylinders, solvents or paint thinner. The distribution of sediment contamination suggests that run-off of salvage yard contamination into the drainage swale may have caused the sediment contamination.

8) April 14, 1989 - Final SRI Comment No. 4 - Tables 3-11 and 3-12 - Amend the units for the inorganic analytical results to read mg/kg instead of ug/kg.

This correction has been noted in the Errata Addendum.

9) April 14, 1989 - Final SRI Comment No. 5 - Amend the maximum detected concentration of lead in surface soils north of Gardner Creek Road to read 103 mg/kg instead of 28 mg/kg.

This correction, along with a re-calculated geometric mean, has been noted in the SRI Errata Addendum.

10) April 14, 1989 - Final SRI Comment No. 6 - Table 6-3 - Amend the maximum detected concentration of lead in surface soils south of Gardner Creek Road to read 60 mg/kg instead of 53 mg/kg.

This correction has been noted in the SRI Errata Addendum.

11) April 14, 1989 - Final SRI Comment No. 7 - Page 219, Label the top of this page as "Table 6-9".

This correction has been noted in the SRI Errata Addendum.